

REGIONAL DRINKING WATER SUPPLIES

HEARING
BEFORE THE
SUBCOMMITTEE ON REGULATION, BUSINESS
OPPORTUNITIES, AND ENERGY
OF THE
COMMITTEE ON SMALL BUSINESS
HOUSE OF REPRESENTATIVES
ONE HUNDRED SECOND CONGRESS
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REGIONAL DRINKING WATER SUPPLIES

MONDAY, FEBRUARY 11, 1991

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON REGULATION, BUSINESS
OPPORTUNITIES, AND ENERGY,
COMMITTEE ON SMALL BUSINESS,
Portland, OR.

The subcommittee met, pursuant to notice, at 9:45 a.m., Portland Building, Portland, OR, Hon. Ron Wyden (chairman of the subcommittee) presiding.

Chairman WYDEN. Today, the Subcommittee on Regulation, Business Opportunities, and Energy of the Committee on Small Business convenes in Portland to inquire into concerns that metropolitan area communities may run out of Oregon's traditional supply of soft pure water.

The evidence suggests that abundant supplies of pure water are something that Oregonians can no longer take for granted. In the year 2000, our community will be different. There will be more people and more industry, and this growing population will have a large thirst to quench.

Providing drinking water is usually a local responsibility, but like so many issues, the Federal Government has a hand in it. Federal agencies help manage the watersheds that hold the Bull Run, the Clackamas, and other rivers we tap for water. Federal regulations under the Safe Drinking Water Act set the standards for purity.

Federal clean water and hazardous waste laws are supposed to safeguard our surface and ground water, and Federal money helps States and localities implement the pollution laws. But the Federal force has not always been with us.

In the past, the Federal Government has talked about forcing hugely expensive filtration programs on Bull Run water, even though the purity levels meet public health standards. Some EPA proposals to reduce lead in drinking water could harden our water when other approaches could meet public health concerns as effectively.

Often, the Federal statutes simply go in opposite directions, leaving State and local officials frustrated and uncertain about their obligations to the public. Congressman Kopetski and I are here because we believe that the Federal Government can be a better partner in helping our State meet its water needs.

As a member of the Energy and Commerce Committee, I will have the opportunity this session to help rewrite the Safe Drinking Water Act and the Resource Conservation and Recovery Act.

As a member of the important Agriculture Committee, Mike Kopetski will be addressing ground water, pesticide use, soil conservation, public lands management, and numerous other practices that will affect water quality.

Several other Members of our congressional delegation also sit on important committees that will provide them an opportunity this session to affect water policy.

As we go forward, I hope we can agree on some guiding principles for the Federal Government's role in water policy. Though we demand high standards to protect the public health and environment, it is critical that the Federal Government maximize flexibility and minimize red tape in Federal rulemaking.

Second, we must make the various Federal programs as consistent as possible, so that the right hand actually works with the left, and so State and local officials are not pulled in two directions at once.

Third, we must make the Federal programs as cost effective as possible, directing our limited resources to give us the most for our investment.

Fourth, we must make Federal regulators in Washington sensitive to the unique problems and resources in Oregon so they understand the burdens and benefits of programs for localities, businesses, and our citizens.

This hearing ensures that Oregonians get an early start in voicing their views about our water, the life blood of our future. We have to move forward. Our drinking water systems need to be modernized. New testing requirements are coming on line.

State officials have indicated to me that costs for the changes now staring us in the face, changes that challenge our heritage, will cost more than \$1 billion. At a time when budgets every where are strapped, it is clear that it is going to be tough to generate these new funds to address these issues.

One last point that I would make is that I think it is quite clear from the testimony that Congressman Kopetski and I have received from our State officials that it is going to be especially important in the days ahead for our State to be vigilant in terms of protecting our water from the California raiders.

For some time, elected officials in California have been ogling our water, and it is going to be essential that we get the message out that they do not get it now, they do not get it tomorrow, they do not get it ever, and I think you will see the whole Oregon congressional delegation joining hands in that effort to make it clear that Oregon is simply off limits to California as far as our water supplies.

[Mr. Wyden's opening statement may be found in the appendix.]

Chairman WYDEN. I am especially pleased that Mike Kopetski is here. He has been a terrific addition to our congressional delegation and has secured committee assignments that are just ideal for helping our State tackle these issues. Mike and I have adjoining districts. Mike, it is great to have a chance to team up. This is, I understand, your first congressional field hearing, which is a special honor for me.

We welcome you and any statement that you would like to make.

Mr. KOPETSKI. Thank you, Mr. Chairman. It is a personal honor that my first public hearing in Oregon is with you, as the two of us started out somewhat together in politics 18 or 20 years ago, and it is one of those little notes I will make in my diary in my life here.

Mr. Chairman, I do commend you for holding this hearing as well. Your work in the last decade to convene a committee of outside experts to review the quality of our water in general and the management of Bull Run in particular is well known.

This effort now gives us the foundation to prepare for the challenges of the future. The Portland area has been extremely fortunate to have a clean water supply which is readily and easily accessible. However, we are faced with a great challenge in the coming years; providing to Portland and a growing population, the clean, safe drinking water we now enjoy, even take for granted.

If trends continue, this region's population will double in the next half century. At the same time, we will be burdened with the cost to increase supply. The Federal Government is recognizing an increased threat from modern society's chemical contaminants to our safe drinking water, and we will hear over and over today about the great cost of testing and filtering for these contaminants.

Estimates are that the cost to ratepayers for increased water supply and implementation of new safety regulations for the Portland metropolitan area will run as high as \$1.4 billion over the next 10 years.

This hearing is important. We only need to read the reports coming out of California with the probable insurmountable problems due to lack of water resulting from overpopulation, inadequate planning, and little to no water conservation efforts in that area, to know that we must be vigilant here in Oregon. We in Oregon, Mr. Chairman, can learn from California.

This hearing could not be more timely. The Governor's Drinking Water Task Force recently released its report on providing safe, dependable drinking water in the 1990's. At the Federal level, reauthorization of the Clean Water Act and the Federal Insecticide, Fungicide, and Rodenticide Act, otherwise known as FIFRA, are expected in this session.

We will both be busy, you on the Energy and Commerce Committee, me on the Agriculture Committee, on cleaning drinking water issues. I am looking forward to working with you and the other Members of Oregon's congressional delegation to ensure a cost-effective, safe drinking water supply available to our, and I would emphasize, Mr. Chairman, our very special corner of the world.

Thank you for inviting me to this very important hearing.

[Mr. Kopetski's statement may be found in the appendix.]

Chairman WYDEN. Well, Mike, thank you for an excellent statement.

I also would like to take note of two other people who are here. My committee counsel, Ken Rosenbaum, is a hometown boy and the dean of the congressional delegation's natural resources staff and, at this point, the most senior staff member, which means he has withstood all the punishment all these years.

We are also very pleased that Mike's counsel, Phil Rotondi, who is also a great addition to our congressional delegation, is with us

as well, and Ken and Phil will be helping us make this hearing run just as quickly and as efficiently as possible.

So, let us move right to our witnesses. Today, we have Mr. Tenny, representing the city of Portland; Mr. DiLoreto, representing the city of Gresham; and Mr. Harvey, representing Lake Oswego.

Gentlemen, we welcome you to the committee.

Why do we not begin with you, Mr. Tenny. This is another example of why I have to wear my glasses. I have moved into my golden years, but it is good to see you again.

We are going to ask each of you to try to keep your prepared remarks to about 5 minutes, if you can. We will make your prepared remarks a part of the hearing record in their entirety. Let us begin with you, Mr. Tenny.

TESTIMONY OF ED TENNY, ADMINISTRATOR, PORTLAND WATER BUREAU

Mr. TENNY. Thank you, Mr. Wyden, and we are very glad you are here, Mr. Kopetski. We are very glad to have you at your first formal hearing. I had the pleasure of hearing your first remarks on the floor of the Congress, I think, as a Member of Congress, and was proud to see you there. So, we welcome you.

Mr. KOPETSKI. Thank you.

Mr. TENNY. My name is Ed Tenny. I am the administrator of the Portland Water Bureau.

Mike Lindberg, the Portland City Commissioner in charge of the Water Bureau, is unable to join us this morning because of being involved in the city's budget hearings today, but he asked me to convey his appreciation for your holding this hearing and for the interest in water supply issues which it demonstrates, and, parenthetically, I would like to say that one of the great advantages that we have in this region is that contrary to many others, the congressional district, and particularly Mr. Wyden, over recent years have shown a serious interest in these issues and a willingness to deal with them. Many congressional delegations have discarded the issue essentially as State and local and have not been nearly as supportive as the support we have enjoyed here, and we do appreciate it.

The Portland Water Bureau is a regional water utility, providing drinking water to about 700,000 Oregonians. We serve the 420,000 citizens of Portland, and we also wholesale water to 22 cities and water districts in Multnomah, Clackamas, and Washington Counties.

We participate with the U.S. Forest Service in the management of the Bull Run, which many believe may be the best drinking water supply in the United States, and we recognize that we in the Northwest, and particularly in the Portland metropolitan area, have been blessed with a relative abundance of the highest quality water available.

We are concerned in the Water Bureau, and I know in the region generally, with preserving the quality of water, keeping up with the growth that is implied by the expanding population in the met-

ropolitan area, and still being responsive to the environmental values which make Oregon the special place that it is.

Finding the balance between serving population and economic needs and maintaining the integrity of our environment is really the trick of our industry for the coming generation.

We are experiencing significant population growth, which we believe will continue into the future. We are looking at increasingly stringent water quality standards under the Safe Drinking Water Act, and, at the same time, we have increasing pressure to keep more water in the stream for in-stream purposes. All of these, we think, are waves of the future, which must be integrated effectively.

It means that the challenge to us is very serious, indeed, and, in order to meet the challenge, the Water Bureau has embarked on a series of major studies, and just this arcane chart on your left, on the wall, is designed to reflect the various studies and plans that are underway within the Water Bureau over the next few years to look at the water needs, financial, water quality, ground water, surface water, conservation, the whole panoply of water issues integrated into one planning process that should extend through the mid-nineties.

Our study area extends through what we call the water region, from Clark County, Washington, in the north, to Newberg in the south, from Hillsboro and Forest Grove east to the Bull Run, and over the next 24 months, we expect our studies to answer these questions:

How much demand for water must we anticipate in the next generation?

What are the best available sources of supply which could meet this demand?

How can these supplies be utilized most efficiently and effectively while protecting the environment?

What are the legal and institutional impediments to rational solutions and how can they be overcome?

What kinds of cooperative efforts will be necessary to make best use of our water while minimizing waste?

Virtually every water provider in that broad study area is cooperating in this plan. They are sharing data. We are sharing the draft studies with them. We are sharing the information openly. We are chairing regular meetings of major water suppliers from around the region, where we can all share our concerns and opportunities in a collegial way.

Mike Lindberg, as Commissioner in charge, has appointed a high-level citizens advisory committee, chaired by Mr. Lloyd Anderson, to advise us at each step, and the first in our series of studies is a water demand study to project water demand for the study area to the year 2050.

We are reviewing that data now, and we expect to have a final report within the next 30 days, which I will be glad to provide to you, but this morning, we can give you some preliminary general conclusions that point to trends which we think, despite some refinement of the numbers, will hold true.

The study area now has a population of 1.28 million. By 2000, this should be 1.42 million, rising to 1.7 million in 2020, and 2 million by 2050. A 55-percent growth between now and the year 2050.

Average daily water supply needs will increase by 45 percent between now and 2050, from 202 million gallons a day to 293. That is average daily, and I would like to refer to this large chart over here to make a point. You can see the rise there at the current 1990 point for the total area, up to the total, 45 percent higher in the year 2050, taking us up to nearly 300 million gallons a day.

If you could flip that chart over, I would like to have you take a look on the other side at the peak demand. This is really our key. Our water use almost doubles in the summer, mainly due to people watering their lawns, and if we can flatten this peak and get the use down significantly, the need for total supply can be significantly reduced.

So, we have a strategy both of additional supply needed to provide for the base needs of a growing population and the need for supply and conservation strategies which will flatten that peak and provide for more efficient use of what we have because you can see when you have to build a system to provide for that kind of peak, it means you have to oversize the system probably 90 percent of the year to a significant degree.

Many areas where high growth is anticipated are already at, or quickly approaching, their existing available water supply, particularly northeast Clackamas County, southern and western Washington County and Clark County, Washington, and the regional water supplies can meet average demand requirements even to the year 2050, but we cannot meet peak demand which will occur in the summer.

There are three major water supply systems in Oregon today, which provide a total combined capacity of 331 million gallons a day, and the map over on your right reflects the areas served by those different major water supply entities. The large purple area on the north is the ground water supply area in Clark County.

You can see that those are 225 million gallons a day from Portland through its Bull Run system, 70 million gallons a day from the Clackamas River reflected there in the yellow area, and 36 from the Joint Water Commission of Hillsboro, Beaverton, and Forest Grove, their water coming from the Trask and Tualatin Rivers.

The current average daily summer use for the region is 304 million gallons a day, and it will go up to 425. Remember, our combined capacity is 331 at this time. Peak day water use for the region is now 392 million gallons a day, already more than our total combined capacity. So, we have to plan to live off storage as it is now.

Without a combination of conservation and increased water supply, the available supply from reliable surface water sources will not meet the region's projected summer water needs by the year 2000.

System capacity is already exceeded on peak use days. Even with an aggressive conservation program that would reduce average peak season use by 10 percent between now and the year 2000, new

water supplies will still be needed by 2010 unless ground water supplies can be reliably used more extensively than in the past.

These preliminary findings make it clear that there is much to be done. There is no question that additional water supplies must be developed. The question is, rather, what future water supply strategy will best meet the region's needs?

In order to answer this question, we have begun a major supply option study which will review every reasonable supply alternative in the region. The goal of the study will be to provide a short list of a half dozen or fewer supply options which deserve detailed analysis, and we expect to have that short list by early fall 1991, and, at the same time, the Water Bureau has begun development of a major ongoing water conservation plan designed to educate the public and to change wasteful habits with regard to water use.

We believe that water conservation is a part of our responsibility as stewards of the critical natural resource. We will not seek to develop additional supplies in order to provide for waste. Elements of our conservation plan should be in place this summer.

I know that you have limited time this morning, and there is so much to be said here, I have a hard time reining myself in on this stuff, but let me touch very briefly on a few specific areas of concern with regard to the Federal role, and one is with regard to the Safe Drinking Water Act and Clean Water Act coming up for reauthorization, and FIFRA and RCRA certainly play a role in this as well.

Both address important goals which we support. However, we are concerned that these critical measures not mandate heavy financial burdens on our ratepayers in return for minimal health benefits. There has been, I think, a significant lack of objective, unbiased, risk-balancing in the consideration of the cost benefits of both the Safe Drinking Water Act and the Clean Water Act.

A balance must be maintained, and your attention to and support in these key reauthorization discussions will be of great value to all of us who serve the public in the water field.

In this connection, I would specifically like to thank you, Representative Wyden, and your staff for the strong support you have given us in the past in this respect, particularly with regard to the regulation of lead in drinking water. Your participation was instrumental in crafting regulatory strategies which protect the public health without placing unrealistic burdens on our ratepayers, and that is a benefit that was accrued nationwide, not simply to this region.

Second, there is now much talk about a Federal tax on drinking water to fund various programs, particularly in the area of Clean Water Act implementation. We hope that you will help us convince the Congress that this is a poor idea.

More than 20 States, I believe, already have some form of water tax to fund a wide variety of State programs. The idea is being discussed in Oregon now. There are serious equity issues involved. Water rates are often perceived as an easy deep pocket to finance programs without giving enough consideration to the need to pay for the water system's own needs in the future.

As you know, the need to meet both future supply and water quality requirements will be expensive, and the dedication of our

rate elasticity of Federal programs will make it more difficult to meet our needs at home.

Third, one key potential source of supply which we will be studying is the Willamette. I understand, and I frankly do not know a lot about this but others you will hear from today know more, that there is a very substantial amount of unallocated water associated with Federal impoundments on the Willamette.

When these Federal projects were constructed, no supply increment was assigned to municipal needs. We would like to explore the possibility of making some of that unallocated water available for municipal needs in our region at affordable cost.

This is an area in which your help would clearly be critical. Other speakers will address that further, but as I understand it, essentially, the initial planning for those projects was for agricultural and irrigation water, and flood control. At that time, I think, the idea that municipal water needs would be critical in the way that they are now was not really envisioned. There was no provision made for municipal supply to come out of those projects at a cost even similar to the costs available for other purposes, and we think that is something that deserves review.

We need to study it, too, and we will share that with you as we go along.

Finally, in the more immediate vein, we are strongly committed to water conservation. Representative Chet Atkins has advised us that he will be introducing a bill in the House this session to mandate water-efficient plumbing fixtures. This will be known as the National Plumbing Products Efficiency Act.

We have studied the issue of water-efficient fixtures at some length, and we believe that today's technology makes them practical, affordable, and desirable. The Water Bureau is actively supporting a bill in the Oregon legislature which would mandate them at the State level, and we respectfully request that you consider co-sponsoring Representative Atkins' bill in the House of Representatives.

Today, responsible water utilities must be far more than the competent public works organizations of the past. Our task is to be careful, responsible stewards of a critical natural resource. Our challenges are many and complex. We believe we can succeed in meeting our future needs in ways which are responsible, compatible with sound environmental values, and affordable, but in order to do so, we will need the positive cooperation of everyone involved.

Your support for thoughtful analysis, careful decisionmaking, and for solutions which serve the public best, has been important to us in the past and will be critical in the future, and we are pleased that you have demonstrated once again your commitment to these issues through this hearing.

I guess that I would like to say, just to close, that more than anything else at this point, what we need is the opportunity for the region to give careful study to all the options without the process being sabotaged by those single-interest groups who already know the answers.

So, we are making a serious effort through this planning process to go through objective analysis of everything before us, knowing that there are no easy solutions and trying to let the data speak for

itself in identifying the best solutions, and then deal with the politics and the policy issues involved, and we will appreciate your support in that effort.

Thank you very much.

[Mr. Tenny's statement may be found in the appendix.]

Chairman WYDEN. Mr. Tenny, thank you, and that is very helpful, and we will have some questions in just a moment.

Why do we not go to you, Mr. DiLoreto?

TESTIMONY OF GREG DiLORETO, CITY ENGINEER, GRESHAM, OR

Mr. DiLORETO. Thank you.

Congressman Wyden, Congressman Kopetski, my name is Greg DiLoreto. I am the city engineer for the city of Gresham.

Since 1905, the city has purchased water from the City of Portland Bureau of Water Works. In addition to the Bull Run source, we have access to Portland's Columbia River well field during emergencies or high demand periods in the summer.

Our current annual metered consumption is 200 million cubic feet. We anticipate our growth to be 2 percent per year over the next 5 years. It is our understanding from the city of Portland that they would be able to supply the city of Gresham with water during that period.

With respect to water quality, tests conducted by the city of Gresham in accordance with safe drinking water regulations show water samples from various taps in Gresham to be in compliance with those regulations. That in turn gives us confidence in the city of Portland's ability to meet the safe drinking water regulations.

We are concerned about the possible requirement of treatment of water from the Bull Run watershed. This requirement could impact water rates an additional 3 to 5 percent on rates which are already increasing from 5 to 7 percent per year in Gresham.

As a member of the Bull Run Water Advisory Board, we are working with the city of Portland on this issue of treatment. We support Portland's actions and endorse their efforts to participate in this regulatory development process.

We agree that whatever regulations are developed now and into the future be based on the best available scientific information that will assure that both the national and State regulations reflect the unique circumstances of the Portland water system.

We also support the scientific and engineering studies conducted by the city of Portland to identify the most efficient and effective options for improvements in Portland's water system, in Portland's water treatment and facilities to meet the safe drinking water rules.

Thank you.

[Mr. DiLoreto's statement may be found in the appendix.]

Chairman WYDEN. Thank you very much.

Let us go to you, Mr. Harvey.

TESTIMONY OF PETER HARVEY, CITY MANAGER, LAKE OSWEGO

Mr. HARVEY. Thank you.

I appreciate the opportunity to address the committee this morning.

I am Peter Harvey, city manager of the city of Lake Oswego.

I would like to spend a few minutes just addressing the Clackamas watershed and go through some of the highlights that came to light as a result of the assistance provided by the State health department, which pulled together all of the purveyors of water from the Clackamas to look at the watershed.

We found that the river basin, Clackamas river basin, is one of Oregon's unique drainages. It starts in the high Cascades and ends in the metropolitan area. It has a confluence with the Willamette. The basin is used for a variety of activities. It does not flow slowly or sluggishly, thus maintaining an acceptable water quality for drinking water, recreational, and aesthetic benefits.

In that sense, the Clackamas has some similarities to both the Santiam and the McKenzie drainage basins.

We feel it is essential that the quality of the Clackamas River, from a drinking water perspective, be maintained and/or improved, and the study that was performed by the purveyors with the health department identified a number of practices, including forestry practices, PGE reservoir development, which actually are data-indicated facilitated stream flows in the system of water quality, the role of the State Department of Environmental Quality in terms of point source and nonpoint source discharges. This is an area we are concerned about, especially the nonpoint source surface water drainage into the basin being part of the Tualatin River cleanup. We are well aware of the costs and ramifications of that.

There are sand and gravel operations which are currently not a problem but need to be monitored. Agricultural practices, farms, animal feedlots, nursery operations, again need to be monitored for their discharges.

The minimum stream flows are important not only for fish and wildlife but also in relation to the quality of water in the river and the feeding stream, and we are concerned about use of hazardous materials at the various industrial and commercial establishments that could affect the water quality from their drainage systems.

We are also concerned about the transportation of hazardous materials over the bridges and rivers that are adjacent to the stream. For example, the I-205 bridge crosses the Clackamas just upstream from our water intake position. Now, although it might be fairly remote that a chemical tanker would spill, there is the potential, and we try to urge the State Department of Transportation to look at positive drainage systems when bridges cross streams.

Some of the recommendations of the study was that a watershed committee composed of water users and others that impact the watershed be maintained. I think this is an area where the Federal Government could be of assistance to pull together the various Federal and State as well as local agencies in watershed management.

I think the Soil Conservation Service, Forestry, Forest Service, BLM are a few Federal agencies along with Forestry, Fish and Wildlife, Oregon Agricultural Department, the Extension Service, and Health Department, at the State level.

We feel that, at the local level, we are somewhat powerless to try to pull together some Federal and State agencies and command their attention in working cooperatively together.

Locally, as far as our own situation is concerned, we have a number of water rights, 32.3 million gallons a day [MGD] on the Clackamas dating back to 1967, another 5.8 MGD on the Clackamas for 1975, and a small 3.9 MGD on the Willamette. Our current average consumption is 8.3 million gallons peaking at 18.8, and that again matches Mr. Tenny's chart here showing the difference between peak and average day.

We have, through our planning efforts, projected out not as far as 2050 but to 2012 and project our average daily requirements about 18.8 MGD and peaking around 37.

At the present time, we are providing water to the Tigard Water District, which is identified on the map as Tigard. Its boundaries are larger than the city of Tigard, and about 45 percent of our production is going to Tigard Water District on a surplus basis. Projecting into the future, again at 2012, based on their growth and our own, out of our average daily requirements of about 18.8 MGD, about 8.4 would go to Tigard.

One of the questions that we are facing as a jurisdiction is the continuing relationship with Tigard; whether it will make them a permanent-type relationship or merely continuing to provide surplus water.

Mr. Tenny already mentioned water conservation. This is an area we do want to work on. We are sort of interested. The State has adopted minimum building codes, and in order for a local jurisdiction to get into toilet fixtures that would use smaller amounts of water, the State has to amend its law dealing with the plumbing code. So, as Ed mentioned, we are working cooperatively on that.

We are concerned about the Federal regulations, the various tests. We are spending around \$10,000 a year just on lab tests for our filter plant water. We understand more are coming down the road.

We are working cooperatively with the city of Portland in the plans that Mr. Tenny has mentioned, looking at the system as an area-wide system, looking at the needs, demands, and the capabilities of everyone to meet the needs of the whole area.

In that connection, we have interconnected systems. We are in a position where we can wheel Bull Run water through Tigard Water District, to Lake Oswego, to West Linn, and through Oregon City and, likewise, we can wheel Clackamas water through Oregon City, West Linn, Lake Oswego, Tigard, back to Portland. That is done as more an emergency basis rather than a permanent supply, but I can assure you during recent ice storms, power outages, and things of that nature, we have used that capability, and it has been very beneficial.

At the State level, some things we are looking at through joint powers agreement, the ability to provide bonding capability to a joint powers or what is called an ORS 190 agency. Right now, when more than one jurisdiction get together, they individually have to deal with bonds, and the idea of an agency created by two or more jurisdictions to sell bonds, we think, would facilitate.

Some of the things we are looking at on the Clackamas includes several jurisdictions looking at jointly developing a new intake structure and perhaps processing or filter plant coordination, still maintaining their separate distribution systems.

Measure 5, a local measure, has impacted us, even though it is primarily property tax. If you look at the fine print, there are regulations dealing with rates and how we deal with fees and charges, and I know we are having to reanalyze both our water and sewer rates and all our other fees in light of that measure.

The other comment I would make is in terms of land use regulations. I think in our area the cities are doing a good job on land use regulation because we are tying the development as well as the infrastructure needs together; whereas some other jurisdictions which do not have total service delivery are not doing such a good job of coordinating land use with the provision of utility services.

In summary, I think an important role that the Federal Government could play is in development of meaningful regulations that also work as a catalyst to provide a role to assist and facilitate local jurisdictions work together rather than merely mandating and regulating.

Chairman WYDEN. OK. Thank you.

Let me recognize my colleague, Mr. Kopetski, to begin the questioning.

Mr. KOPETSKI. Thank you, Mr. Chairman.

Mr. Harvey, and all of you can comment, in terms of leakage from the systems in the area, what is the status of that?

Do we lose much water because of leakage?

Mr. HARVEY. OK. Ed can talk about that. We have looked at that in terms of the water run-through our treatment plant, and totalled the water run-through meters, going directly, and find it is really very small. I cannot give you a figure, but it is not a major consequence.

Mr. TENNY. That has been our experience, too.

We have done or are just completing a system-wide sort of state-of-the-art sonic leak detection survey of our system, and we have done the same thing for a couple of our wholesale customer systems, and our total leakage now system-wide for Portland appears to be about 4 1/2 percent, which the industry standards would indicate is about as low as you can go.

Generally speaking, the benchmark seems to be that below 10 percent, it is usually not cost effective to go after it. Above 10 percent, it is. So, 4 1/2, we are pretty pleased, and we actually found that our most common source of leakage is fire hydrants that are tested, operated, and then not fully closed.

We are doing a training program with the Fire Bureau, and we expect that 4 1/2 may soon look more like 4.

Mr. KOPETSKI. That is excellent.

When we talk about conservation measures, they are not necessarily structural within the system; they are more the user plumbing systems?

Mr. HARVEY. That is correct. Toilets are a major issue, and there is a lot of new technology in terms of low flow from a gallon use standpoint.

We have even encouraged flow restricters in showers, which help, but I think the data indicates that toilets are a major factor, and if we can get the plumbing code modified there, that we can deal with that.

Mr. TENNY. Our research indicates that typically the standard toilet you find in a home now, when you flush it, it is not unusual for it to use seven or eight gallons, and 1.6 is now attainable and dependable on products being manufactured today.

The other area is frankly a matter of public education. That is really the key. We have to establish a mentality of stewardship and conservation on behalf of the public, and we have to first demonstrate that publicly ourselves, but the key to this issue is lawn watering. I mean it sounds like such a petty issue, but the fact is if we could get everybody to let their lawn die one year, we probably would not know what to do with the water that resulted because we literally double our use in the summer because of people watering their lawns.

Mr. KOPETSKI. That leads to a couple of things.

First, I have tried to change the law with respect to bringing equality to the number of toilets in our building. When I was in the legislature, I learned that it was very difficult to change the building code through legislation.

So, is your effort administrative or is it legislative in this respect?

Mr. TENNY. It is actually both. We talked to the plumbing board—is that what it is? It does not sound right, but—

Mr. KOPETSKI. It is a builders board.

Mr. TENNY. Yes, right; with revisions of the plumbing code on the administrative side, and we have gone after legislative work on the legislative side.

It remains to be seen in this session how it will go. The hearings, I believe, are scheduled within the next week, but we are waiting to see the amount of resistance that is there, but, frankly, in most States where this has been accomplished, it has been a bruising battle.

Mr. KOPETSKI. We live in the grass seed capital of the world.

Are there any discussions with that industry in terms of the development of grass seed strains that do not require as much watering?

Mr. TENNY. I think that there are, and there are two schools of thought there, and I believe both are being pursued.

One is to help develop strains which are less water-dependent. The other issue, and we have worked with a small company that is a good example, I guess, of independent business starting from nothing, called Moisture Dynamics in Corvallis, where a gentleman down there has some very innovative views on the watering techniques associated with the different kinds of waters and basically maintains that many of the grasses that Oregon now grows in abundance are not so water-demanding if they are treated properly.

There is a whole science of this developing. The name xeroscape has been given to it, to identify not simply less water-demanding, but horticulture and agricultural planning that takes water demand into consideration and techniques and approaches.

Mr. KOPETSKI. Are you optimistic that these seed practices can be implemented within the next few years?

Mr. TENNY. Well, I think it is too soon to tell how much resistance there will be in the marketplace because, to a certain extent,

I think it may imply the necessity to change the buying habits of the homeowner out there and the kinds of landscaping that they look to.

My hope is that by making people more aware of a water-conserving ethic, that will in turn encourage them to think about it as they do landscaping, and that in turn will encourage the marketplace to respond to that demand.

I think from our end of it, our role in municipal water supply is to help create that ethic, and that is what we are trying to do as a first step.

Mr. KOPETSKI. Finally, Mr. Chairman, on the conservation issue, even if we were to put our best conservation efforts forward and take a stab at the percentage of demand, is that going to take care of demand in the next decade?

Is it significant? Are we only talking about 10 or 20 percent?

Mr. HARVEY. Our current consumption figures right now, our average daily consumption runs around 8.3 million gallons a day. Our peak is 18.8. The peak is irrigation.

Mr. TENNY. I think from our experience and the research of the American Water Works Association, where we play an active role in their conservation committee nationally, we might be able to figure, if you started from scratch, that you could get 10 percent, but that would be assuming that you would get probably half of that from the infrastructure, things that we have already done.

So, our expectation is that in terms of customer behavior modification, there is probably another 5 percent out there, and we think that it will almost all have to come from education and modification of behavior because rate strategies traditionally across the country do not seem to work. They work in the very short run.

Typically, for every dollar that the water rate goes up, you can maybe get a 30-cent, short-term savings in water, but it does not last. Within a couple of years, it comes right back up. So, we have to change the attitude.

But in answer to your question, the conservation is an important component, both in terms of the actual water and in terms of the kind of ethic and stewardship that it implies and, I think, people expect of us, but it will not take the place of additional supply.

Mr. KOPETSKI. Sounds like, Mr. Chairman, the bottom line is Oregon needs more water.

Chairman WYDEN. No question, no question. Let me pick up on my colleague's thoughtful points and begin with you, Mr. Tenny, and Mr. DiLoreto and Mr. Harvey as well.

The State officials are going to tell us in a few minutes that we face \$1.4 billion in the upcoming years in terms of additional costs, costs of modernizing systems, costs of meeting our Federal requirements.

I think everybody would say that is really an eye-popping, mind-boggling kind of figure.

Let me ask, starting with you, Mr. Tenny, assuming that we have a very significant conservation effort, the kind of conservation effort you are talking about, what would it mean to ratepayers over the next few years to factor in a billion dollars worth of capital improvements?

Now, that is going to be a statewide figure. So, what I would like is any analyses you may have with respect to your system. I would assume in a big system, there is a smaller impact on ratepayers because you can spread it out more, and in smaller systems, it would be tougher, but let us see what we can offer and exchange just in terms of any analysis you have done on the crucial issue of rates and where they would be given this huge agenda that you are talking about in terms of capital costs.

Let us start with you.

Mr. TENNY. Well, I think clearly the issue here becomes, in part, economies of scale. So, we believe that there will be a considerable pressure on systems around the State and around the Nation to look for ways to pull together, consolidate, cooperate, do various kinds of strategies to achieve the economies of scale, and that will be true of the little ones as well as the bigger ones.

That will be a key issue. It ties in with conservation because it is ironic that to a large extent, conservation means higher rates, and if you are saving water, your bill is not as great, you are not contributing as much to the maintenance of the system and its upgrade, and, therefore, the individual rate per unit tends to go up.

The only way to get around that is if you can save enough that you can defer or down-scale future capital improvements. It remains to be seen, and it is really too soon to say whether the kind of savings and conservation water savings could be achieved which could achieve that kind of down-scaling of capital supplies and make it come out financially.

But we think that this kind of consolidation, regionalization, joint planning, and attempts to reach economies of scale absolutely are crucial. I think I spent a good part of the day talking with folks from the city of Sandy and going up and looking at some of the smaller systems up on Mount Hood, where they have some critical water supplies up there, and it is a classic example of isolated, very small systems, small cities, small communities, trailer parks, resorts.

We need to find ways to more readily and easily pull those together and provide incentives for people to do that.

I think that the reality of it is national figures show that we have been disinvesting in water and waste water and sewer systems for many years. Water rates are low. In Portland, \$10 a month roughly is the average household cost, and that is less than half cable TV typically, and, so, I think rates will have to go up, and there is no getting around it.

The question will be are the mandates placed upon us, Federal and State, ones that are really cost beneficial relative to the expenditure the public puts out? Can we achieve the economies of scale and remove impediments to joint work and can we pull together in such a way to keep the total cost of supply down?

All those things, I think, can be done, but we are in the infancy of this kind of planning, and over the next 5 to 10 years, we have to catch up in a hurry before we can answer your question intelligently and specifically.

Chairman WYDEN. Mr. DiLoreto, Mr. Harvey, the rate issue.

Mr. DiLORETO. Yes; as I mentioned during my testimony earlier, just for the treatment alone of the Portland system, and since

Gresham is a customer of that, our rates would anticipate going up 3 to 5 percent.

What that means is for the debt service that Portland could incur on \$300 to \$500,000 per year of debt service, the city of Gresham's rates would have to increase 3 to 5 percent.

So, as that number keeps going up, if we had a million, our rates might have to go up 10 percent per year. To give you an idea, our rates are currently for a single family monthly water bill in the winter, \$13.50 per month. So, we would be looking at an increase of around 60 cents a month.

Chairman WYDEN. Mr. Harvey.

Mr. HARVEY. We already have a filter plant. So, some of our costs are geared with that. Those fixed and variable. Our average rate will run around \$17 which is partially fixed and partially based on consumption.

In looking ahead at capital costs right now within Lake Oswego, we are serving a population of a little over 30,000, within the Tigard Water District boundary, a little over 24,000. Looking ahead, we are looking at capital costs and net operating costs in the neighborhood of, oh, \$40 to \$50,000.

Another factor here that we have not pointed out is the relationship of the water system to the fire system, and one of the things we are finding is the need for additional reservoir storage to meet minimum fire flow requirements, which is an offset to people's insurance premiums, and, again, we, prior to some State mandates, we had more extensive requirements for buildings to sprinkle, put in fire sprinklers, and the State has somewhat taken that authority away from us.

Just to give you an idea, a difference in our capital costs without sprinklers, we are looking at capital costs in the next 5 years of around \$13 million. With a sprinkler system, we could drop to \$10 million because we were able to require more buildings to be sprinkled, and that is a fairly significant difference.

If we extended it to both Tigard and ourselves, without sprinkled buildings, \$31, almost \$32 million, versus \$28 million. So, that is another factor that does not relate to the supply, but it relates to the capital costs of building reservoirs and pipe sizes to have that fire flow available.

Chairman WYDEN. Let me move on and ask you, in terms of your approach with the Federal Government, what the position of our cities are.

You all are not asking for any rollback at all in terms of the Federal standards and the requirements in terms of the quality of water. All you are saying is give us more flexibility in terms of how we meet those requirements.

Is that essentially the position of your three cities, Mr. Tenny?

Mr. TENNY. I think that is absolutely correct, Congressman, and one of the areas in which you are helpful to us, points up the difference that originally the Safe Drinking Water Act standards tended to be met on the basis of saying here is a menu of treatment alternatives which every city should do, regardless.

We were able to turn that around with your assistance and that of a few others in Congress to an attitude that said essentially, let us establish a standard for drinking water and expect you to meet

it. Get us a standard, and we will meet it, and we have absolutely no quarrel with that whatsoever.

Chairman WYDEN. With respect to the two major statutes that I am going to be faced with—Mike has different ones, but I will be working on the Safe Drinking Water Act and RCRA—what would be your priorities? I think both of them are a good bet to get out of Congress this session, and it would be helpful as we start if we could have a sense of your priorities. Let's begin with you, Mr. Tenny, and then I want Mr. DiLoreto and Mr. Harvey, in on this, too.

What would be your priorities in terms of the reauthorization of those two bills?

Mr. TENNY. I think the Safe Drinking Water Act has a significant flaw in that it sets out essentially in statute to provide rules, and I think we need to carefully review the structure of that act and consider whether or not it really makes sense to say to the EPA, for example, within fixed time lines, no matter what the State of scientific knowledge, you shall promulgate rules on a certain number of contaminants every year, essentially, whether you need it or not, and, unfortunately, what has happened is EPA has been driven through the structure of the legislation to promulgate rules where the science is not very good, where the data is not very complete, and where nobody can say with real certainty what the likely outcome or cost benefit of a particular regulation is like.

So, I think both the relatively inflexible time lines and the relatively inflexible mandate to do certain kinds of regulation of certain kinds of numbers do not work well in the public interest in my opinion, and if we could get the law restructured more along the lines of directing EPA to craft rules which would try to guarantee a certain level of water quality around the Nation, and leave a little more flexibility to them in the best ways of doing that, I think we would all get a much better buy for the dollar.

Chairman WYDEN. So, that is Safe Drinking Water.

What about RCRA?

Mr. TENNY. RCRA, I frankly know little about, and I am told by our water quality people I should know a lot more about it because it is a lot more important than I know, but, unfortunately, I still do not know.

Chairman WYDEN. We will hold the record open for that.

Mr. TENNY. Thank you. I appreciate that.

Chairman WYDEN. I am going to move quickly.

Mr. DiLoreto, Mr. Harvey, Safe Drinking Water and RCRA.

Mr. DiLORETO. Well, both of those, I do not know much about RCRA either, and the Safe Drinking Water Act, I would have to concur with the comments that Ed made.

Again, as I mentioned, the keys in any of the regulations that come to us is that we ask they be based on scientific and technical data that we can substantiate as we go along.

Mr. HARVEY. I would concur. None of us want to provide drinking water as a problem, but it appears that EPA is just having to invent tests for us to comply with, and I am not sure that makes any sense.

I am not familiar enough with the RCRA to comment.

Chairman WYDEN. With respect to plumbing products, and I think all of you made the case that you feel this is an area where we should look to promote conservation, have you done any analyses for our area about what could be conserved with more efficient plumbing products?

Mr. TENNY. It is very difficult for us to quantify the savings that could be made.

We know that they work. We know that they can save, oh, 20-30 gallons a day per household, would not be unreasonable amount for them to save. The real question is how practical is it to replace the fixtures out there. So, you can do it on a per fixture basis, but to leap from that to say if we could get everybody to change this year, if we only change as we build new construction, gives it such a tremendous range of potential that I think the best we can say is that if everybody were to do it, we could save 20-30 gallons per household per day as soon as they did, I am sure, at a minimum.

Chairman WYDEN. Gentlemen, other comments on plumbing products with respect to efficiency?

Mr. DiLORETO. The only thing I might comment on, and Ed mentioned it earlier, is the public education program.

If each of us were to promote that further, you would find that lawn sprinkling does not require the amount of water that most people put on their lawn. That can be done one to two times a week, and there are measurements you can make and you show that your lawn is being adequately watered, but, unfortunately, people set their timers and they go off every morning for an hour and, quite frankly, they are overwatering their lawns.

So, I think an education program would go a long ways in conserving water. I know we have looked at that at the city of Gresham.

Chairman WYDEN. Mr. Harvey.

Mr. HARVEY. I would agree.

Chairman WYDEN. OK. Now, something like a hundred years ago, in the city, there was the foresight to restrict entry to Bull Run watershed on Mount Hood National Forest to protect the watershed values then.

Do you all think it is time to be looking at setting other watersheds aside to make sure that our kids have what they need?

Mr. TENNY. I think it is an issue that certainly needs detailed study and warrants detailed study.

There is both the first level issue of the place that drinking water should play in the hierarchy of values for which watersheds are managed, and then, at the second level, if it is to be a high-level goal in the management of a given watershed, the question of what management practices are necessary to set it aside.

On the whole, the success of the maintenance of water quality in the Bull Run over the past century is a powerful testimony for the long-term value of that kind of protection. Whether it can still be achieved in today's environment, and the pressures for multiple use and so forth, is a very good question, but it is one that needs to be answered.

Chairman WYDEN. Your associates keep agreeing with you.

I am just going to ask a quick followup. What about setting aside the Little Sandy watershed as a companion to Bull Run?

Mr. TENNY. Well, the Little Sandy is one that is high on the list of studies in the option study that is coming up, and it is one of the reasons I was up talking to the city of Sandy last week.

I think we need to identify once and for all what the potential uses of the Little Sandy are and how soon it would make sense to use them for those purposes. We hope to have some answers to that in certainly no more than a year, and hopefully those answers will dictate what management policy should be looked at for the Little Sandy.

Chairman WYDEN. One last question.

The regional water meetings that are being held, the regional water planning meetings, do Federal officials come to those, people from the Forest Service, the Corps, or the EPA?

Mr. TENNY. There are several different forums. Metro has a regular meeting of the water resources group that is broader, drinking water, waste water, sewage, all of those issues, at which the Federal agencies are represented as well as State agencies.

The meetings that I referred to have been purely the local water suppliers without any other agencies involved, frankly, to get people to begin to talk to one another and leave their guns at the door.

Chairman WYDEN. Do you think it would be useful to get some of those Federal representatives at the supply meetings?

Mr. TENNY. Yes; I think that is an issue that will be useful as we begin to get data, and we will need their input and their analysis. I think that we are in a two-step process. The first is to overcome some of the longstanding turf and ego issues involved in local water suppliers and get them to treat one another in a collegial fashion. We are, I think, almost there.

At that point, I think we will have broken down those issues and built up sufficient trust that we can, as a group, open that up to other interested parties in a positive way, and that needs to be done.

Chairman WYDEN. Let me yield to my colleague. I think the point is obvious, gentlemen, if you want to see the Federal Government be a better partner on the supply issues, do not go too long in the regional meetings on supply without getting them involved. Otherwise, you will be playing catchup ball. I think you know, Mr. Tenny, that has been particularly our problem on some of these filtration issues. We have waited until we have the crisis on the porch and a markup in the committee, and then the phone lines get burned up trying to figure out how to turn it around.

Mr. Kopetski.

Mr. KOPETSKI. Mr. Chairman, thank you very much. Thank you for yielding.

Just as a followup, Mr. Tenny, you talked in your testimony about the supply options study.

Are the appropriate Federal agencies involved in that study?

Mr. TENNY. Yes; we are just getting started with that study, literally, now, today, this week, and we are putting together advisory committees, and we will be sharing the data and the draft reports and asking them for input through the advisory committees on that entire process.

Our intention is to make it as public as possible.

Chairman WYDEN. Any further questions?

Mr. KOPETSKI. Mr. Chairman, I assume that our staffs would be notified of such meetings or hearings.

Mr. TENNY. Yes; we will gladly notify them and provide you with draft reports as they come along for comment and input as well as the data that we are basing it on and ask for your feedback and cooperation. It is very helpful to us.

There are times when we are so close to these issues, it really helps to have somebody standing back a little further and take a little different perspective.

Mr. KOPETSKI. I guess I am curious about the workplan on the study.

Is it going to focus on impoundments or shift to more ground water usage in the region? Can you provide a sense of that?

Mr. TENNY. Sure. It will look at all of the alternatives. That is the intention, so that we have hired consultants to do this study, and we have essentially given them our list, saying here are the things we can think of that are even remotely plausible that should be looked at, and those would include impoundments on all of the available surface streams, run of the river uses of some streams, additional ground water potential from some places.

We will look at the possibility of using the extensive salt aquifer system under this region to store surface water during the winter to be reused during the summer.

Essentially, the entire range. Our goal is to get to the end of this study and move forward on the short list of good options without anybody being able to say that their particular favorite option did not get reasonable and fair analysis.

Mr. KOPETSKI. So, it will be both?

Mr. TENNY. Absolutely.

Mr. KOPETSKI. Finally, just scientifically,—I made a mistake, Mr. Wyden, in Moscow, I took a waterlog course. So, I have a little bit of knowledge here, which is dangerous.

In terms of the aquifer here in the valley, and as we go down the valley near the California border, do you know or do you have in your mind the aquifers around that border? I mean could they kind of go underground and steal some water from us?

Mr. TENNY. No; I do not know, sir. The only thing I know about interstate aquifers is the reason that Clark County is in our study area is because they share the same ground water basin that we do, which goes under the Columbia River, so that we are actually in the same water basin.

When we get into the southern part of the State, I frankly do not know. Others testifying later may well know more about that on the statewide level, but I frankly do not.

Mr. KOPETSKI. Well, are you feeling that the folks in Clark County are sensitive to these issues as you seem to be here in Portland?

Mr. TENNY. Yes; very much so, and they are participating in the study, and there are lots of discussions back and forth, and they are very much a part of the team.

Mr. KOPETSKI. Thank you, each one of you, for your testimony. It was very helpful.

Chairman WYDEN. Let me just ask one other.

Mr. Tenny, do you see a day when the Portland area will have to take drinking water from the Willamette or the Columbia?

Mr. TENNY. I think it is entirely possible. I think that we need to look at it in terms of the overall tradeoffs.

I cannot think on our list of about 17 to 20 supply options that we reeled off just off the top of our heads, there was not a single one that did not have a negative side.

So, the question will simply be, where do the negatives and positives best balance from the broad standpoint of our needs, the environment's needs, instream flow needs, the whole works, and it may turn out that on a cost-benefit basis, it is more expensive and effective to treat Willamette River water to the standards required and leave more flow in the Bull Run or the Trask than the other way around. We really do not know, and we genuinely are going into this list of studies with no preconceived conclusion in mind.

Chairman WYDEN. Gentlemen, we thank you.

Mr. TENNY. Thank you very much.

Mr. DiLORETO. Thank you.

Chairman WYDEN. We will be busy in the days ahead.

Next panel, officials from the State Health Department, David Leland and Brendan Doyle, Drinking Water Section, State Health Division.

Gentlemen, we welcome you. We are trying to keep the opening statements to 5 minutes to the extent we can, so we could have some time for questions. Let us begin with you, Mr. Leland.

TESTIMONY OF DAVE LELAND, MANAGER, DRINKING WATER PROGRAM, OREGON HEALTH DIVISION

Mr. LELAND. Thank you very much.

My name is Dave Leland. I am the manager of the Drinking Water Program for the Oregon Health Division.

I am going to start here this morning on one item and then turn over to Brendan, and then I will be finishing up the comments at the end.

The Health Division's Drinking Water Program has had primacy for the Safe Drinking Water Act Program since 1986, and, as such, we directly administer all the Federal drinking water requirements in Oregon.

We also, therefore, can represent the front line, if you will, in terms of bringing these regulations into effect here in our State.

At present, we meet all of the EPA program directives, and I will address that a little bit more later. In addition, we have several other parts of our program we administer to make it a more comprehensive program rather than just administering new rules, and that includes things like training and certifying water works operators and providing technical assistance to systems.

Our brief presentation this morning will address what we think the major costs and challenges are in two areas of the drinking water field. One is to develop the financial capacity to improve drinking water systems in Oregon, and, second, to fund regulatory and assistance programs to help bring the new Federal drinking water standards into effect here in Oregon.

I would like to start by just giving a real brief background on what is happening with the Federal drinking water regulations here in Oregon, and Brendan has a couple of charts that are reproduced in my hand-out testimony.

Our first chart shows the history of what is happening with drinking water regulations in Oregon and nationally. The Federal drinking water regulations really are characterized by greatly increasing scope, and complexity, and number of standards, as you well know.

This chart shows how we are moving from about 25 drinking water standards to over 200 over in about the next 5 years. Our second attachment here gives us a little more detailed view, and I apologize for the complexity of this, but I think it just reflects the complexity of the Federal regulations. So, maybe it makes a point, but it shows the schedule for all the drinking water regulations under the Safe Drinking Water Act, and a time line for how those are coming on line.

These new regulations really are nine groups, and three of those groups of regulations are now in effect here in Oregon, which leaves us six to go.

At present, we are on schedule here in the State of Oregon in terms of adopting these regulations at least for now. This is not true in all the States in the United States. However, if you look at the 1991 line on this chart, you look to the left, in the past, I can tell you those things are done here in Oregon. They are in effect, and we are moving ahead with those, and I think the point I want to make with this chart is that we have a lot left to do here. We are just getting started.

However, my main point is the drinking water regulations are no longer something we talk about as coming; they are here. They are starting to have impact on system spending and operation here in our State.

To give you some examples, the city of Milwaukee has just recently completed construction and testing of treatment systems to remove the industrial solvents from their water supply. This has cost them almost \$2 million to bring this treatment system on line.

Mr. Tenny addressed earlier what the city of Portland is doing. We have just reviewed and improved a plan from the city of Portland to come into compliance with the new surface water treatment rules on an interim basis which is going to cost them anywhere from \$2.5 to \$4 million to implement, and then they have, of course, their major water supply demand and treatment studies underway in addition to that.

The Corbett water district, east of Portland, is spending about \$600,000 to put filtration system on line in their system, and through the remainder of 1991, my staff will be evaluating some 55 community water systems to determine how many of them must provide filtration or alternate sources of water, and our rough back-of-the-envelope estimate, should all those systems have to install filtration, is \$18 million, and those systems are listed back in the hand-out materials.

So, that is a background on where we are, and at this point, I would like to introduce Brendan Doyle to speak about developing water system financial capacity.

I would like to kind of hold him up as an example of the State-Federal partnership that we have going here. Brendan comes to us from the EPA under contract to help us with this project that he is going to describe and has really done an excellent job for us. It is something we would not have been able to do by ourselves.

Chairman WYDEN. It was a Federal raid that worked.

Mr. LELAND. Pardon me?

Chairman WYDEN. It was a Federal raid that worked.

Mr. LELAND. Yes, yes; absolutely, absolutely. So, Brendan.

TESTIMONY OF BRENDAN DOYLE, MANAGER, TASK FORCE ON DRINKING WATER CONSTRUCTION FUNDING AND REGIONALIZATION

Mr. DOYLE. Thank you, David.

Congressman Kopetski and Congressman Wyden, it is a pleasure to be here today to describe the work that Oregon has been doing.

I want to add, as a senior analyst from EPA who has been on loan to this State, that Oregon should be commended in its efforts at taking initiative to look at the State's capacity to implement the Safe Drinking Water Act statewide.

Through our efforts, we have been taking a look at three major issues, the State's funding capacity, its ability to deliver technical assistance to systems, and the training requirements which are also inherent in trying to bring everybody up to speed, not only with the regulatory schedule that is there, but the overall change in water system management that is taking place nationwide.

As part of our task force effort on drinking water construction funding and regionalization, there are two major facets, two major issues, that we have tried to address. One is in the funding area and the other is in this area where we can give systems more incentives and help them facilitate their efforts to better coordinate and consolidate their operations so that they can move ahead down the road and continue to deliver safe drinking water cost effectively to their customers.

We have finished up our work on the task force and are now focusing on a bill which is being presented to this session of the State's legislative assembly as well as delivering a full report that will be out by the end of the month and which comprises our recommendations.

These recommendations try to address the overall funding needs for systems in the State, which we have documented through a statewide survey of capital improvement needs that we conducted over this past summer.

In that survey, where we took a look at the 983 community water suppliers in this State, we have charted the figure that you used earlier today, which is about \$1.4 billion in total needs. This is for everything that a drinking water system does. It is not just meeting the new regulations. It is keeping up on repairs and replacements and going back and picking up investments that have been foreshortened and delayed by other pressures on public works investments, and that \$1.4 billion needs pertains to all systems statewide.

We then, in talking to the 153 systems that we reviewed in our survey, found that about \$1.2 billion of that is directly tied to what we consider to be nongrowth needs, just serving existing customers with the water that is being provided to them. Of that largish number, we find that there is about \$400 million—about 35 percent of that is tied to treatment, and, again, about \$240 million of that, through using some assumptions that we have made, could be tied and attributable to the new regulatory program coming on line.

So, of the total need figure, about 20 percent can be tied to the new regulatory program phasing in here statewide.

Through our survey, we also had an opportunity to take a look at the kind of water rates that ratepayers are paying statewide, and what we found is that in small systems, those serving 250 people or less, folks are typically paying \$10 to \$12 a month for the first thousand gallons that they use; in some of the larger systems, that number drops to about \$6 to \$8.

What we have seen in going in and looking at a number of communities that are already on top of these regulations is they have been able to interpret them so far. Folks are doing their studies, they are going out and hiring consultants, doing the engineering analyses that need to be done to get new treatment on line, and we see that, in some situations, these rates are going to have to increase because of the new investments that are being made and in some cases where systems have had to catch up in terms of their overall rate structure.

We have mentioned, or we have seen, for instance in the Corbett Water district just out east of us here, where the municipality there, the folks that have been managing that system, early on doubled the water rates so they could create a sinking fund or reserve fund to help pay for some of these improvements coming.

They are going to be installing a new \$600,000 filtration system for all of their customers over the course of the next year, and because of this advanced effort that they have made, they are expecting that there will not be very much of a rate impact there.

In other towns, however, we can see where in Hermiston, for instance, a monthly rate of about \$11 a month could jump to about \$30 to \$40, even \$50 a month without some combination of Federal-State financial assistance helping these people out.

In Joseph, out in the Wallowa Mountain area, the system has already doubled its water rates and, through a combination now of Farmers Home and other State assistance programs, will be able to continue to provide safe water and meet the filtration requirements with the monthly rate of about \$18 per household per month instead of \$40 a month per household, which would happen if you did not have any of that Federal or State assistance available.

The moral of this story is that the rate impact is significant, but it is a little different in different parts of the State depending on what the solution is that in individual systems come up with in terms of meeting the new requirements.

Statewide then, in terms of trying to take a look at State's capacity to meet the needs that we have documented, we can still see that using the existing programs that are in place, which comprise three Federal programs, five State-funding programs, systems still need additional help. We are looking at a \$40 to \$80 million a year

shortfall in terms of just the construction dollars systems will need to keep delivering safe drinking water statewide.

How do you meet that shortfall? Well, we have taken a look at the existing State water development loan fund and their community development block grants as well as the State's special public works fund, and through the work of, and the great cooperation that we have received of the State agencies, we can see that through attracting additional contributions of about a million dollars from the State legislature during this biennium, we think that we can make about \$40 million worth of construction loans available to these water systems in need.

This is a program which we are just laying out in draft form in a bill which we hope to present this session, and we will be working with the various legislative committees that will be involved in trying to make that happen.

We are also asking the State to contribute more in terms of the grants that go out to particularly low- and moderate-income communities who cannot afford the debt service on their own municipal bonds and cannot afford the debt service on a straight State loan program.

So, these are all kinds of areas for innovation and areas which we think will help the State meet the financial capacity that is there.

As I mentioned, we are also continuing to rely on the existence of community development block grant funds that come from HUD, Farmers Home Administration loans that come through the Farmers Home Administration as well as Economic Development Administration funds that continue to be made available through Federal agencies in Oregon.

That comprises most of what we have done in terms of our funding proposal. I might also mention that we have taken a hard look at all the different management options, those consolidation and regionalization options that systems have, and we have found that there is sufficient legislative statutory authority on the books in Oregon for systems to start working cooperatively together now to look at where they could, as Ed Tenny earlier mentioned, find an improved economy of scale, a better way of operating, a way of trying to share and spread some of these costs and to try and manage problems better cooperatively.

Some of these options include systems consolidating with one another, annexing to a neighboring system, or in areas, for instance, in eastern Oregon, hiring circuit riders who can help spread some of that operation and maintenance cost over a number of areas, over a number of systems.

There are about—well, a little over a hundred private utilities in the State. They, too, are looking at where there may be opportunities to get into more public-private partnerships as well as the ongoing effort by the existing systems, special districts, cities, and counties, to look at where new districts can be created to better provide safe drinking water.

That pretty much sums up the comments that I have on the efforts that we have been engaged in here and our task force efforts, and I would like to turn the discussion back over to Dave to discuss the program funding for Oregon's State Drinking Water Program.

Mr. LELAND. Thank you, Brendan.

I just have a few comments again relating to funding the regulatory effort here in Oregon, and as you can guess from looking at the charts and whatnot, the administration drafting of this regulatory effort is really a huge task.

Currently, our program is funded about half and half through Federal funds, through the primacy grant that we get every year from EPA, and about half through State general funds.

In the area of the primacy grants, obviously, the workload has gone way up in terms of administrating the new Federal regulations. However, the primacy grant, while the grants have increased over the last several years, they have increased very little and really not commensurate with the workload.

On the general fund side, the State general fund side, everybody is aware of some of the restrictions in that area that have developed here over the last few months within our State, that we do not really expect new revenue from this area. In fact, it may go down.

Just reference for your information a study that was done several years ago by the Association of State Drinking Water Administrators, which studied the State programs nationwide and concluded that States need almost a 100-percent increase in total program resources to really carry out the administration direction of the new requirements.

Let me also mention, just because I feel like I need to mention this here in this forum, a little bit about Oregon's public water systems and who they are.

You have heard today from the large systems, and, in Oregon, we do have a relatively small number of very large municipal water systems in the State, and I think you have heard really good things from them today and good input. They are highly professional, highly competent. They have the resource base, and I think you have gotten a real good indication of their thoughts and ideas today.

But, really, Oregon is characterized by a very large number of very small water systems. Just for an example, we have about 3,500 public water systems in Oregon that are subject to Federal regulation. A thousand of those are what we call community water systems that serve residential populations, and of those thousand community water systems, two-thirds of them serve less than 200 people. So, we have a lot of very small water systems.

These water systems really lack the kind of financial capacity for monitoring and for installing treatment that is going to be required by the new regulations. They are characterized by part-time and even volunteer operators in some cases. There is a lot of turnover among people who operate these small water systems. They experience really a lack of expertise in drinking water quality issues, although this has been improving over the last several years as we have targeted training and certification efforts on these kinds of folks.

Typically, their water systems are very simple. There is no treatment in place, and, so, when we come to these systems and start talking about water treatment, we have a major technical hurdle to get over right at the beginning.

Typically, the new drinking water rules do tend to be very complex and tend to be really designed more for the large systems. So, small water systems really need help. What they need is direct onsite technical assistance. There is just no substitute for getting out there on the ground and working with them so they understand what they need to do.

They need targeted training, and the real danger here, I think, with the kind of resource crunch that we are all experiencing is that we target a lot of efforts in the new rule adoption and administration efforts, and we tend to reduce our efforts in the area of technical assistance and training which then generates more non-compliance, and you get into that sort of slippery slope.

So, I want to bring that out for your consideration.

Finally, what can we say about the Federal role, and I know that is the thrust of this particular hearing. Again, enormous task ahead, and we have tried really to forge in Oregon here a partnership among all the folks that are involved in drinking water, rather than just to run a purely regulatory program, and members of that partnership are obviously the public water suppliers for one. They are the big folks that are affected.

Certainly we are a part of that partnership as the primacy agent. The Federal Government is part of that partnership. They are the ones that write the rules and the EPA writes the rules, and then we have to come along and adopt rules that are no less stringent.

We have also included in this partnership some other very valuable members, the professional organizations, American Water Works Association, our local Rural Water Association, very heavily involved with us, and educational institutions, particularly the community colleges, have been very helpful in the training area.

But what can the Federal Government do? Well, I would offer several things. There are some opportunities to help financially here obviously. The Federal Government could help with our State water system improvement program that we are thinking about here, and it needs some money to get it started. There is one area where the Federal Government could help.

The Federal Government could fund the drinking water programs in the States adequately to be sure that the new rules are brought on line on time and properly implemented, and then, finally, with the Safe Drinking Water Act reauthorization coming along here this year, I would echo a lot of the things that Ed Tenny said earlier.

We have a very ambitious program underway already, and I would just like to have you look real carefully at new initiatives and deadlines that might be imposed at this point and look carefully at evaluating health risks involved with new initiatives and how they compare with health risks that we are trying to already address, and rather than pile new things on, let us take a look at what we are doing now and if we need to shift gears in some areas, that is just fine, but let us make that an integrated approach and schedule these things in relation to what we have already taken on.

I would like us to continue to look at maximizing State flexibility in the new drinking water rules. At the same time, I would like to point out that flexibility means State workload, and, so, it is a little

bit of a double-edged sword, but we certainly believe that we would like to tailor the requirements or have the opportunity to tailor the requirements as much as possible to meet our local needs, and we would also like to try to minimize complexity as much as possible, and again to echo what some other speakers have said before. We need to really pay attention to developing adequate science to support the drinking water standards rather than look simply at statutory deadlines, and through this kind of an approach, I think we can focus our efforts on the greatest health risks and effectively address those.

That would conclude our comments and we will be happy to answer some questions.

[Mr. Leland's and Mr. Doyle's statement may be found in the appendix.]

Chairman WYDEN. OK. Mr. Leland, thank you.

Let me recognize my colleague again.

Mr. KOPETSKI. Thank you, Mr. Chairman.

Just a couple of questions to each.

Mr. Leland, in with, I guess, your mission, of course, is to provide healthy water to the citizens of Oregon, and when we talk about costs, and we talk about regulations, and all of that, it is all to this purpose.

Mr. Tenny, in his testimony, said, and I will just read a sentence, Mr. Chairman, in talking about the Safe Drinking Water Act and the Clean Water Act, both in quotes, "Both address important goals which we support. However, we are extremely concerned that these critical measures not mandate heavy financial burdens on our ratepayers in return for minimal health benefits."

I guess if you could just comment a little bit about have we gone too far when we started looking for 200 different kinds of potential contaminants in water. Is that what Mr. Tenny is talking about, that these are just minimal health benefits or of minimal health benefit value?

Mr. LELAND. Well, I think the concern there really is again getting back to this idea that somehow we decide what to regulate based on some arbitrarily set schedule instead of science, and I would support what he said there.

I think, at this point, that what we have on our plate right now represents a really good public health effort. I am concerned as he is, though, that if we decide, for example, and the current act mandates 25 new standards every 3 years, a logical question could be brought up. Well, do we have 25 things that need regulating? I guess that is where we are raising the question to let us really look carefully at that. Let us make sure our science is good, and make sure that we are not just hunting around for contaminants to regulate simply to make up a list of 25.

Mr. KOPETSKI. Well, are you suggesting that there are some on the list that do not need to be on the list?

Mr. LELAND. I think, as again to repeat, what we are on schedule to regulate now makes pretty good sense. These are reasonably well-known contaminants we have, although we have a certain lack in some areas of knowledge of whether the contaminants are really out there in the level, whether they occur in our drinking water systems, but we do need to find out that they do. That is,

obviously, the testing is very good. The testing will tell us what is in there and what is not, and I guess, again maybe to be repetitive, if we go on with just a scheduling, ongoing scheduling of more and more testing, I am not sure that will really give us that information that we need in as economical a manner, having everybody test for everything, in essence.

What we have going now, I think, is when we get to the end of this first 83 contaminants that we are going to regulate, we are going to have a very clear picture of what is in our drinking water, and what the levels are, and be able to deal with those.

Mr. KOPETSKI. So, you would not take any off the list?

Mr. LELAND. No; I would not at this point. However, what I would like to see is the flexibility maybe to regulate some of those possibly on a different schedule. If we find something else out there, something else as the science develops, that is more of a concern than some on the list. I would like to see us have the flexibility to deal with those issues first.

In other words, put something off that may be a little less risky in order to really get the most bang for the buck up front.

Mr. KOPETSKI. I have a particular pique with EPA on the dioxin issue because we have rather than one Federal standard, we have at least a dozen, probably 25, somewhere in that range, and it is a national regulation and a national issue, yet the implementation of that regulation was left to the States. I have a feeling more because of economic interests in the timber industry in the Southeast, for example, rather than looking at what we do here in the Northwest with respect to the dioxin issue and our severe standards that we have set here.

So, I am trying. I am new, and I am trying to sort through some of these very important health-related issues and economic issues as well. I am shouting out loud. Let me shift to the funding side of this, Mr. Doyle.

I did not quite understand what you were saying. You are going to the legislature to ask for a million dollars which will leverage 40 million, and how does that work?

Mr. DOYLE. Through the use of enhancing the State's existing bond programs, both in the special public works fund, which is administered by the State's Economic Development Department, and the water development loan fund, which is administered by the State's Water Resources Department.

Our guideline through our task force, in trying to come up with the State funding assistance program, was to take a look at programs that were already in place, where there were bond authorities already in place to see where they could be better focused on making investments in drinking water systems, and in using a million dollar infusion of State funds, you would then help to underwrite some of the bond issuance costs. You would help to reduce debt coverage ratios and a whole bunch of technical stuff that goes into financing drinking water programs, and use both of those bond programs to then go out and sell bonds and turn around and make the proceeds of those bonds available to drinking water systems as loans.

Mr. KOPETSKI. Is the source of those dollars lottery dollars or is it general fund?

Mr. DOYLE. The proposal now seeks State appropriations, and we have taken a look at both lottery dollars and general fund dollars.

As you are probably aware, ballot measure 5 has increased the competition for any State funding going into drinking water systems a great deal, and, at this point, we are about to start briefing the various committees that have jurisdiction over the lottery dollars to take a look at where we may be able to use some of those. Those are the dollars now that help leverage loans out of the State's special public works fund.

Those dollars now, lottery dollars, are specifically tied to economic development-type projects. One part of our legislative proposal tries to put health and safety concerns in safe drinking water delivery on an even footing with drinking water projects that are done to help economic development projects.

Mr. KOPETSKI. Who would actually sell these bonds? Who would—

Mr. DOYLE. The State.

Mr. KOPETSKI. The State.

Mr. DOYLE. State treasurer, under the authority of the Water Resources Commission in the case of the water resources departments bonds and the Economic Development Department in the case of the special public works fund bonds.

Mr. KOPETSKI. Repayment of the bonds would come from ratepayers in the special district?

Mr. DOYLE. Right.

Mr. KOPETSKI. Is that correct?

Mr. DOYLE. Exactly.

Mr. KOPETSKI. Yes; and for point of information for you, I serve on the Agriculture Committee, and Farmers Home is under the jurisdiction of that particular committee, and one of my subcommittee assignments is the department operations subcommittee.

So, if there is any creative ideas or anything I can do to help with these kinds of bonding programs, loan programs, please let me know.

Mr. DOYLE. I am pleased to note that Farmers Home has seen a pretty good increase in terms of the dollars which they have made available through their community assistance program, both for waste water projects and for drinking water projects, and that Oregon investments in drinking water projects with Farmers Home funds are increasing, though, as I am sure you are aware, the State's allocation of those dollars will always be limited by the population formula, population-based formula that is used to allocate funds across the country.

Mr. KOPETSKI. Could you provide me some background information on that?

Mr. DOYLE. Certainly. We will be able to provide that to you.

Mr. KOPETSKI. Thank you. Thank you, Mr. Chairman.

Chairman WYDEN. OK. I thank my colleague.

Your testimony is very helpful, and I am one of those Members of Congress who has both big systems and small systems. The city of Portland, obviously, is a big system, and also, when I have town hall meetings in Corbett, I hear what was said by Mr. Doyle. Folks in Corbett obviously have real concerns.

My question to you, Mr. Leland, to start, is, do you think that EPA gives too little weight when they design their rules to the impact of those rules on small systems?

Mr. LELAND. I think my short answer would say yes, but I am trying to do that in a way that is not very blaming because they have a daunting task in front of them as well, and I think quite often that is really true.

The rules tend to be very complex. They tend to be difficult to track for the State agencies, and their complexity tends to make them difficult to explain, particularly to small water system operators.

Chairman WYDEN. That certainly was the case in terms of the 1986 statute. Chairman Waxman, I know, is still getting letters from them trying to explain the delays and the problems, and I just think you have to conclude that they have really given short shrift to the impact of those regulations on the small water systems. Given what you have said about the number of those systems in our State, that is something our delegation has to work with.

Mr. LELAND. Yes.

Chairman WYDEN. The other part, with respect to the small systems, is that EPA has written some exemptions into the standards under the Safe Drinking Water Act, but I gather that for our small systems, even these exemptions are not really very reasonable and are not doing a whole lot to help; is that correct?

Mr. LELAND. Well, they are very difficult to administer. There is a formal process behind doing exemptions, paper work, hearings, and all kinds of things that do tend to make it very difficult.

Chairman WYDEN. Let me ask you one other question on cost because obviously any of Mike's constituents and my constituents who come to a hearing or hear about this hearing are going to be talking about the bottom line.

EPA has estimated that the cost of meeting 33 new drinking water standards, the ones that were announced in the past month, would be \$88 million a year for the whole country, and I gather they put out a press release then that said that the impact in their view would be small.

I would be interested in your assessment, both of this prediction and EPA's track record, because my sense is when it comes to costs, the EPA consistently low-balls things, that what we have out there is a black box, almost a fiscal fairyland, where they throw these figures around, while in the real world costs always come up significantly higher. I would be interested in your assessment of that prediction of the \$88 million a year and whether you think it is small, and perhaps even more importantly, whether their predictions over the years have shown much accuracy.

Mr. LELAND. Well, Congressman Wyden, you are exactly right. I think those estimates do tend to be very low. I think where we see maybe the reasons for those estimates being low is that typically, I think, EPA takes an approach to these regulations as particularly when they estimate treatment costs, that all you have to do is take some sort of a treatment unit off the shelf for so many dollars and sort of plug it in, in between the well and the distribution system.

That is almost never the case, and there is always other attendant things that need to be done to install treatment from an engi-

neering standpoint, system design standpoint, and all those things that tend often not to be considered and frankly difficult to consider on a national level.

So, I would say that I would expect the cost to be higher than what has been put forward.

Chairman WYDEN. So, what happens are a lot more problems once you get into it than what you originally thought, and that bumps up the cost.

Mr. LELAND. That is right. Once you get into the real on-the-ground engineering and determining exactly how a particular system in the field, what they need to do to comply with the requirements, and I would just mention one other thing maybe just to go along with that since you mentioned these—the next batch of regulations.

What we are starting to get into is literally the flood of new contaminants that we are looking for is getting into more and more sorts of unknown areas. In other words, we do not have data at hand in Oregon to suggest how many water systems really are going to have problems with these 33 new contaminants because we have very little data that has been developed in advance of these regulations to tell us how many systems really might experience detections of these type of contaminants in their water, and I think that is really a result of this fast-tracking that has gone on here the last couple of years.

In our first implementation of significant new testing requirements for the industrial solvents, for example, we had several pretty good national studies of drinking water systems around the country that really showed us kind of how many water systems we would expect to find these chemicals in, and as we move in this fast-track mode of adopting new standards, we do not have the time really to do those kinds of research surveys. So, we do not know, and largely, I would say the 33 contaminants we are about to be looking at in the next couple of years here, a lot of those are pesticides, and our data on those are very limited.

So, what we are going to find out about Oregon water systems is going to be what we find out on the first tests that are done by the communities. That does help.

Mr. KOPETSKI. Mr. Chairman, I just really want to underline and underscore what you are saying here.

I have just been to Washington for only a month, but I am just amazed that those folks back there, too many of them, believe that there is all kinds of money, and they keep spending this Nation further and further into debt, and, on the other hand, they fail to recognize that back home in our districts, we have local governments, whether it is the water district or the State, or the school system, that have to have a balanced budget, and we have to pay to implement these Federal mandates, some of which we need to do. There is no question about it, we are talking about the public's health and well-being, but the further East you go in those airplanes, there is something happening there.

They forget that somebody has to pay the bill, somebody has to implement the regulation, and whether it is the Corbett Water District, they have to pay for it. They have got to understand what they need to do. They need to figure out if there is a problem, and,

if there is a problem, they have to take measures to fix it, and that usually costs a little bit of money.

The Corbett is the reality of America with these things, and, so, I think we have to be the bridge of understanding back to them; make them understand exactly what is happening back home.

I think you are exactly right in this whole financial and regulatory matter.

Chairman WYDEN. Well, gentlemen, I think you can see that Mike and I feel very strongly about the points you have made about the impacts on the small systems and EPA's projections of costs, and we want to work closely with you. My sense is that in the major committee I sit on, the Commerce Committee, the Safe Drinking Water Act is going to be considered early on.

We would very much like to have your ideas and suggestions on these water issues. Mike, too, will have these issues coming at him very early on as well on the Agricultural side. You have two Members of Congress here. You have struck real sensitive chords with us in terms of the comments.

I was going to ask one question, and you touched on it, Mr. Leland, in terms of the pesticide issue.

We tried to divide these panels to cover different aspects, and you are on the health side of the equation.

Are you picking up health problems with pesticide residues in ground water at this point in our State or was that what you were referring to when you said it was still early on and you were just getting out there for the first time?

Mr. LELAND. Well, I think you will hear a little bit about that from the speaker on your next panel, from the DEQ, but we have done some and worked with DEQ on a number of studies of specific areas around the State where we have generated a lot of information on pesticide occurrence.

But as far as statewide as a whole, just our knowledge of how much impact on ground water there is of pesticides is pretty limited, and what—

Chairman WYDEN. Are there communities now that are at risk in terms of health problems as a result of pesticide residues in ground water?

Mr. LELAND. Specifically, the pesticide data that we have so far really affects private wells, areas where people are handling their own wells because they are in agricultural areas, obviously, out in rural areas where people have individual wells serving their homes, and that is the majority of the kind of information we have on pesticides right now.

But we are going to have a lot more on the public water supplies in very short order. We have done some testing of public water supplies around Oregon for pesticides and have not found a lot at this point, but we have not done a lot of testing either.

Chairman WYDEN. Gentlemen, thank you very much. We will be talking often.

Mr. LELAND. Thank you for the opportunity.

Chairman WYDEN. Our next panel, Gail Achterman, former Natural Resources Assistant to Governor Goldschmidt, former State Water Resources Commission member; Mr. William Hutchison, Chair, State Environmental Quality Commission, accompanied, I

think, by Greg Pettit, Department of Environmental Quality; and Lorna Stickel, Chair of State Water Resources Commission.

It is good to have all of you. I have some old friends on this panel, and we will take special note of my friend Gail Achterman. I am just trying to think how many years ago; more than 15 years ago.

Ms. ACHTERMAN. We do not want to remember, Ron.

Chairman WYDEN. Gail Achterman and I were taking people out to the Hoover Towers at Stanford University. That was our school job to get through school. We go way, way back, and, Gail, it is great to have you. I know you have been tackling these issues for years and years now in great detail.

We will make everybody's statements part of the record in their entirety, and we will begin with you, Gail.

**TESTIMONY OF GAIL L. ACHTERMAN, PARTNER, LAW FIRM OF
STOEL, RIVES, BOLEY, JONES & GREY**

Ms. ACHTERMAN. Thank you, Mr. Chairman.

It is very nice to be here this morning, and to see both you and Congressman Kopetski again. Actually, this is the first time I have seen Congressman Kopetski since he has been Congressman Kopetski.

I am going to keep my oral statement fairly short. I think that my perspective is really one that is a little different from some of the testimony you have already heard.

I have been working primarily for the last 4 years on the overlaps between water quality and water quantity problems, and I have particularly spent quite a bit of time in the safe drinking water area dealing more with the problems of small communities rather than with the issues that you heard about from the large municipalities who testified earlier today.

As I note in my testimony, I am on the board of one of those small water districts in Mr. Kopetski's congressional district that Mr. Leland talked about, and I think it is really important to keep the concerns of these small districts in mind because they are the bulk of the entities in Oregon that you have to deal with, that have to comply with this Act, even though they are not the bulk of the users and consumers of water.

I am going to talk about three things: First, costs of complying with the Safe Drinking Water Act; second, the availability of municipal water supply; and, third, the interrelationship between the Safe Drinking Water Act and compliance with forest practice laws.

First, on cost, I am not going to repeat the cost estimates you have already heard today from the State health division. Complying with the Federal Safe Drinking Water Act is expensive. I think none of us would argue that those expenses were not needed, that they do not need to be made, that if people demand clean and safe drinking water as they should, it is a very basic factor in public health. Yet, given the very high costs of complying with the statute in Oregon alone, I think that careful risk assessment is needed.

Are all the dollars that are going to be spent really going to result in public health benefits? It is just a plain and simple cost benefit analysis that needs to be done, and I frankly have some

real serious questions about whether it has been done adequately in the context of the Safe Drinking Water Act.

Consideration of some examples, I hope, can demonstrate why risk assessment and greater flexibility are important, and I am going to talk primarily about these small districts.

We have examples just in the Mount Hood area of some small districts that you can verify serve virtually exclusively second home recreational properties, yet the safe drinking water standards that have been set nationally are based on the assumption that people drink that water every day regularly. So, the exposure rate for people drinking water from these small districts that are serving recreational properties is completely different than the exposure rate for another system the same size that might be serving people who live in homes year round and consume that water every day. So, your health risk to the consumer is completely different in those two systems, and yet the same standards would apply.

Another aspect of that difference beyond the consumption rates is that on some of those systems up around Mount Hood, there have been historic problems of giardia infection occurring in the water and public health problems resulting in the consuming population as a result.

In some of the other systems, there is no record of any health problems associated with the water consumption, and, in fact, if you looked at the area in which the water is gathered and the historic pattern of activity in that area, it would be very hard to figure out on some of these systems how any of the chemicals, the hundreds of chemicals that are listed in the EPA regulations, could conceivably get into the systems given that they are forested lands where about the only activities that have gone on are fishing, hunting, and perhaps timber harvesting. It is a little difficult to figure out how those chemicals would come just on basic experience.

I think that the underground storage tank program and its impact on rural communities in Oregon really provides a good example of an analogy that you should keep in mind as the Safe Drinking Water Act is reevaluated.

It is a very important program, and we do not want ground water contamination from leaking underground storage tanks any more than we want poor drinking water. Yet, applications of uniform national standards has resulted in closed gas stations all over major sections of rural Oregon, and it has had very serious direct impacts on small businesses and individual citizens in terms of the availability of retail gasoline in the State.

When Oregon required water system operator certifications, something the health division addressed in their testimony just a few years ago, many rural systems had a very hard time meeting the requirement, in spite of the State assistance that was able to be provided at that time with extensive targeted training programs for the system operators.

The water district that I am on the board of does not have a full-time operator. It basically operates itself, and luckily we have one person who is a member of the homeowners association who has some expertise in the area, or we would be in real trouble, and

there are lots and lots of other community water systems in the same situation.

These small systems are going to have an even harder time paying for and understanding their obligations on Safe Drinking Water Act compliance than they did in meeting the operator certification rules of the State health division, and, frankly, the reality is that there are water systems in Oregon that are not going to comply with the Safe Drinking Water Act. They simply are not going to do it. They have neither the money nor the expertise, and then the question arises having written a law, what are you going to do if there are people who are not complying with the law, and specifically in this situation, what are you going to do?

Is the health division or the Environmental Protection Agency actually going to shut people's water off? What kind of enforcement action are you going to take? It does not make a whole lot of sense to write legal requirements that in reality at some level become unenforceable, especially in situations where there have been no health problems with the system, where you would have to go to a judge and say, Judge, shut these people's water off, even though there is no record of any health problem with the particular system.

No one questions the importance of safe drinking water, but what does deserve to be questioned is the health benefit of imposing uniform national requirements on all systems no matter what their size or history of health problems, and the health risks, and without regard to the history of chemical contamination, exposure, and risk in the particular geographic area and the particular system that is involved.

The second question that I wanted to address is water availability. As the water systems in the State are required to meet the new Federal standards, inevitably they have to look at their water supply. No one is going to finance the new facilities that they may be required to put in under the Safe Drinking Water Act unless they have some assurance of supply, and I am afraid that what is going to start happening as these various providers, particularly the small- and medium-size communities, start looking at their water rights, is that they will not have them.

When I was on the Water Resources Commission, we were doing minimum stream flows on Dairy Creek in Washington County, and the city of Banks said, "Well, gee, you know, maybe these minimum stream flows will affect us," and they came to the hearing and said, "We think these may affect us," and the department said, "Well, what are your water rights. We cannot tell if they will affect you unless we see your water rights," and they looked, and the city of Banks did not have any water rights. They had an entire municipal system serving an entire town in Washington County, and they had no water rights.

Through some maneuvers, we were able to get their water rights in process before the minimum stream flow was set, but another planning effort that is going on now under the Omnibus Wild and Scenic Rivers bill on the Salmon River, which is a tributary to the Sandy, is finding the same thing, going through this planning process on the scenic qualities. They have found a number of community water systems, again these smaller systems, that have been

taking water from the Salmon and the Sandy for years and do not have any water rights.

Now, the reality is that most Oregon streams today are overappropriated. There is no sort of water to be had out of these surface systems or at least not in critical times, dry portions of the year. So, when water providers start redesigning their systems to meet drinking water requirements, they are going to find appropriating water from new sources is going to be difficult. It is simply not there for the taking the way it was historically, and that is going to make the challenges of regionalization, consolidation, that much more pressing, than you already heard Mr. Tenny and others testify about.

Finally, I would like to just make one brief note on forest practices. The State and the State forestry department, in particular, has received many complaints of late about the impact of logging practices on private, State, and Federal lands on water supply systems. Many systems throughout the State appropriate water from sources on Federal lands, or forested private lands, or State lands, and then it goes to where the people are who consume the water.

Under Oregon law, the forest practices regulations are only aimed at providing treatable water, not drinkable water, and there definitely is a difference, and, in fact, if you ask the health division, and if you ask almost anyone, they would say do not drink the water out of the streams on forested lands when you are hiking or recreating because of the risk of giardia and other infections that you can get just drinking untreated surface water anywhere, probably, in North America.

Yet, many of these small rural systems particularly have no treatment at all, and turbidity from the logging does affect the quality of the drinking water. There is no question about that, and the public response to the turbidity problem often is that the forest practices rules need to be changed, but given my experience, at least over the past 4 years, working with the health division, and the State forestry office, and also working with the U.S. Forest Service on forest planning, I think we have to be very cautious on this point.

No one would argue, I do not think, with the importance of having forest practices rules that are designed to meet water quality standards. We need to do that. Federal land managers need to do that. State and private land managers need to do that. We need to have protection for a whole lot of reasons beyond drinking water considerations.

But with the Federal safe drinking water requirements, many of these rural systems are going to be required to install treatment works in any case or hook into a larger system that does have treatment facilities available, and I think it is important to realize that connection and to target forest practices reform, recognizing the reality of the Safe Drinking Water Act requirements, so that the two sets of regulations can be fit together, and we do not set aside a lot of forest lands and put additional restrictions on it in order to protect drinking water supply systems that are going to have to stop being used anyway because they are going to have to hook up to larger systems that have treatment available.

What should the Federal Government do about this? I think the greatest need right now is a careful need of health risk, a careful analysis of health risks associated with drinking water systems, and a real careful analysis of whether the Federal requirements can be modified in a logical, workable way to allow flexibility for small systems, particularly targeted at the health risk, not just at size or some other arbitrary criteria. The other need is obviously for ongoing Federal dollars to pay for new Federal regulatory requirements, but recognizing the Federal Government does not have any more money than the State and local governments in the United States. That is very unlikely, and I think what you really need to concentrate your time on is allowing additional time for compliance, recognizing that it takes a long time for some of these requirements to sort of filter down to these small community-based systems, to just recognize the fact that we really do not want to get in the business of Government cutting off people's water, and what we really want to do is provide them the technical assistance to make sure they are providing healthy, safe drinking water to their consumers.

Thank you.

[Ms. Achterman's statement may be found in the appendix.]

Chairman WYDEN. Thank you, Gail. Thank you very much, and that is very helpful.

Let us go to Bill Hutchison.

Mr. HUTCHISON. Congressmen, I was not expecting to be able to be at your hearing when it was first scheduled, and Greg Pettit prepared some testimony for our agency. Maybe we could start there, and if you would permit me a second shot at this bite of the apple, I would like to share some comments as well.

Chairman WYDEN. Sure. Well, let us go to you, Mr. Pettit.

TESTIMONY OF GREG PETTIT, MANAGER, WATER QUALITY AND BIOLOGICAL MONITORING, OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Mr. PETTIT. Thank you for the opportunity to talk to you today.

For the record, I am Greg Pettit, manager of Water Quality and Biological Monitoring Laboratory Division of Oregon Department of Environmental Quality.

I have 13 years of experience with the department on water quality issues. Formerly, I was the ground water quality coordinator for the Water Quality Division and oversaw the development of the Oregon Ground Water Quality Protection Act, a comprehensive ground water quality protection bill enacted by the State legislature in 1989.

I am currently a member of the National Governors Association Task Force on Agriculture and Water Quality.

The basic mission of our agency with respect to water is to protect water from contamination that could impair the beneficial use of the water or threaten public health or the environment. Beneficial uses include public water supply, propagation of fish, wildlife, and aquatic life, and for domestic, irrigation, industrial, recreation, and other beneficial uses of the water.

Often, but not in all cases, the drinking water use is the most sensitive to contamination. We differ in our mission from the health division of the Department of Human Resources in that we concentrate on the protection of the resource and its natural environment through the control of sources of contamination.

Clean, adequate water supplies are essential for public health, industry, agriculture, wildlife, recreation, and quality of life. The effects of contamination both on public health and the environment are not always immediately evident. Ground water contamination, for example, can persist for hundreds of years and, as a result, affect not only immediate use of a resource but future generations as well.

I would like to mention three issues I believe need to be addressed in order for us to more effectively make progress in protecting our water resources.

First is the implementation resources. Both at the State and Federal level, considerable environmental policy regulations have been developed without adequate regard for the cost and practicality of implementation. The effectiveness of any environmental policy is limited by its implementation.

We need to consider both existing programs and new programs, the cost, both public and private, of the program, and ways of funding it or implementing it.

For example, the wellhead protection program, which is contained in the Safe Drinking Water Act, is a program that has considerable merit, but it is also costly to implement and implementation has not been funded. We have seen a proliferation of initiatives at the Federal level both in legislation and in EPA strategies that have ignored costs and funding.

We, in Oregon, are very proud of our record as a leader in environmental protection. However, our resources are limited, and we have to be careful that for a given amount spent on environmental protection, we get the maximum return.

Efforts to protect water quality in Oregon are not limited by lack of statutory authority or strategies, but are primarily limited by funding.

The second point is coordination and consistency. Many of our water quality protection activities stem from Federal legislation. This includes RCRA, CERCLA, FIFRA, and the Clean Water Act, Safe Drinking Water Act, and the Farm bill.

There are many environmental policy issues that are shared by these programs, such as the development of standards. These activities need to be coordinated and consistent. Currently, they are not. For example, acceptable risk levels represented by Federal drinking water standards often are considerably higher than risk levels represented by aquatic toxicity criteria or RCRA cleanup levels.

As a result, public water supplies can serve water with contaminant concentrations at levels higher than acceptable cleanup levels for ground water contaminated sites. It is not my intention to imply that the drinking water standards are inappropriate, but that it is difficult to explain this type of inconsistency to the public.

In addition to consistency between programs, we need consistency over time. The public, the regulator community, and the Gov-

ernment agencies must have some stability in policy and standards. At the Federal level, long-term strategies for environmental protection would allow the States more effectively to implement programs.

My third point would be prevention. Currently, there is a tremendous imbalance in the amount of resources that are being spent on correcting problems resulting from past practices to preventive activities. This is particularly true in the area of ground water.

We need to find ways of reducing the amount of pollutants that will eventually enter their way into public waters. In order to accomplish this, more should be done to support monitoring, inspections, and enforcement, regional water planning, development of highest and best practical methods, and perhaps most importantly, public education, and technical assistance.

Although the value of prevention is seldom argued, its importance is often not reflected in program budgets. The amount of money that is being spent on cleanup activities continues to dwarf that which is directed toward more preventive programs.

Again, I thank you for the opportunity to talk to you on this important issue, and I would be happy to answer any questions.

[Mr. Pettit's statement may be found in the appendix.]

Chairman WYDEN. OK. Thank you very much.

Bill, did you want to add anything at this point?

Mr. HUTCHISON. Yes; I have carved out a few comments to make.

Chairman WYDEN. Great, sure.

TESTIMONY OF WILLIAM HUTCHISON, CHAIR, STATE ENVIRONMENTAL QUALITY COMMISSIONER

Mr. HUTCHISON. I feel a little bit like I am preaching to the choir as I listened to the two of you speak today, but let me just add to what Greg has said.

On the issue of implementation and resources, I think along the lines that Congressman Kopetski spoke to, that we really do have with ballot measure 5, and everything, an expression from the grassroots level that this passes the program down without bringing your checkbook to the table and is just a philosophy that is bankrupt, and it will not work in the future.

We need, I think, even at the Federal level, to develop a more true cost approach to how we administer Government.

Coordination and consistency. I bring to this issue my experience as chair of the Regional Hazardous Waster Advisory Council. I think one of the messages that we got out of that effort was that we are in it together, and I think that applies to the issues before this panel, and that pollution prevention should be at the top of everyone's hierarchy.

That is important because I think of the sailor in the middle of the ocean, water, water everywhere, and not a drop to drink. I think we are headed for those days. My theory is that we are headed for a scarcity even here in wet Oregon.

So, we have adopted at DEQ and on the Environmental Quality Commission a technology-forcing strategy. Our idea is to build in growth and safety margins so that we really do have sufficient re-

sources both from a quantity and a quality standpoint in the future.

Congressman Kopetski, we made a tough decision on dioxin as you may be aware on our commission. Even on this Monday morning, we feel like we made the right one. EPA can be faulted in several respects, but, again, what we chose to do there, I think, is to take a conservative approach to build in growth margins and safety margins on the Columbia River.

At a national level, what is happening is they are recommending a standard, and they are deviating from that as they approve particular State programs. Theoretically, that is premised strictly on the individual circumstances of each State. There are criteria that are built in to gauge whether or not the standard meets the Federal program requirements.

Ours needed to be more stringent for a number of reasons, beneficial uses, salmon, et cetera, but one of our permittees has already embraced this new technology. We will be able to meet the standards, and that is increasingly the word at the national level. It is technology forcing. We create some disruptions along the way, but our thought is that it is better to drive that true cost and that reality of limited assimilated capacity early rather than perhaps going to a super fund analysis or solution, which is a buy now, pay later philosophy that I also would suggest is bankrupt.

So, even with agriculture, we are trying to bring them to the table to play, because we have got on the horizon endangered species issues and in-stream requirements. The Governor's watershed enhancement board, I think, is an example of an exciting new regulatory philosophy where we have brought in-stream appreciators and out-of-stream appropriators to the same table and gotten them in to a win-win sort of scheme where they are modifying grazing practices and enhancing the amount of water and the quality of water that is available in-stream, turning intermittent streams into perennial streams.

Integration then is another message that I think needs to be played through the whole Federal and State regulatory scheme. Single purpose, using the water exclusively to a single purpose, will not work any more. One of the precedents that I have had experience with is the Diack case, and that is a case in which the Oregon Supreme Court really announced its conviction that the Scenic Waterways Act in Oregon requires integrated water management policy.

On Portland's issues, a case note on Diack was recently prepared, and I am going to leave that for the record, if it is all right. It is cited at 20 Environmental Law 133 [1990]. That is from our Northwestern School of Law Law Review, and one of the suggestions from that paper is that it appears that flows in the Sandy River are inadequate to meet both the reported water rights and scenic waterways uses especially during summer months. Thus, future municipal water demands pose a real threat to the Sandy River scenic waterway.

The city should not be allowed to sell its water to other municipalities if alternative sources are available, and if the Sandy scenic waterway will be harmed. Political will, conservation, and then the

possibility of new water sources may prevent or reduce harm to scenic waterway values.

The point that I think needs to be made there is that as people define what they need in terms of water supplies, we need to make sure that the conservation is included in that equation. We simply have to drive that ethic, and then, in addition, we need to inventory all sources of supply.

We need to look everywhere for water, and that would include ground water resources, for example, and, hence, our regulatory focus on quality of ground water which we are trying to make sure is there when the time comes. So, moving back up the ladder requires some technology-forcing philosophies that would reduce the amount of contamination that historically has been leaching into these resources that I think will become increasingly more valuable in the years ahead.

From a megatrend standpoint, what you read is there are those who would like to see the Sandy become a scenic waterway; the only one in the Nation or the first in the Nation from its head waters to the mouth. It is a critical resource, located right next to the city of Portland, probably one of the most heavily used scenic waterways in the entire country.

So, we are all in it together, I guess, is the message I bring, and I think anything we can do to drive this sense of scarcity and an adaptation up front is going to produce huge dividends downstream.

Thank you.

Chairman WYDEN. Thank you.

Ms. Stickel.

TESTIMONY OF LORNA STICKEL, CHAIR, STATE WATER RESOURCES COMMISSION

Ms. STICKEL. What a joy, going to bat for cleanup, particularly since we are past noon, but thank you for being here, Congressmen Wyden and Kopetski.

My name is Lorna Stickel, and I am Chair of the Oregon Water Resources Commission, on which I have been a member for the last 7 years.

I am also a member of the Western States Water Council, and I have been a land use planner in Oregon for 17 years.

My primary involvement in the issue of drinking water supply has been a dual one, local land use planner involved with local policy and decisionmaking on dealing with change as our community grows and as a person serving on a State policy commission dealing directly with water quantity issues.

My remarks are going to be primarily oriented to my State role. We, in the State of Oregon, the Water Resources Commission, has considerable policy powers regarding water allocation within the parameters set by the legislature within the statutes.

As you know, within the West, the role of the State in setting policy and implementing that policy under the prior appropriation doctrine is a long-standing one. Like most western States, there is a considerable body of law, rules, and policy regarding water that exists.

Most recently, Oregon entered into the undertaking of development of a water management program. I have copies of it here today. I know you must get copies at times of materials, so I didn't bring any unless you expressed an interest in having them. They certainly are available. They may have already been sent to your offices as far as I know by the Water Resources Department, but this is the third. We coordinate all the efforts of all the State agencies involved in water in the State, and, every 2 years, we prepare a report that indicates which policy areas we will address, which agencies will address them.

We have a guide to all the water management agencies in the State, and then this is the detailed one that actually sets out the water program, and the tasks, and which agencies will be involved, and then this is presented to the legislature to help support the budgetary process, and the Federal agencies are a part of this. So, I did not want to imply that it is only just the State.

Specific to the Portland metropolitan area's water supply picture, the State has adopted statewide policies addressing conservation and in-stream water rights, ground water management, interstate cooperation, and riparian and avian management on public lands.

The next stated policies which set policies which will be addressed by the commission will include a water storage policy. In addition, the Water Resources Department has been involved for the past year and a half with updating the Yamhill Basin Plan and the Sandy Basin Plan for the first time.

The primary issues most likely to be dealt with in these basin plans, which are anticipated to come before our commission in March, include such things as surface water allocation in terms of the types of uses allowed and the limitations imposed by statute, and the flow findings needed to implement the scenic waterway designations and targeting the Portland metropolitan area there.

The Bull Run and Little Sandy watersheds' primary purposes are for municipal water supply to best meet the needs of Portland and the region, to implement the statewide policy on conservation, and the role that the Water Resources Department has in the management of water supplies allocated to various uses within particularly various storage projects related to water rights.

The State is participating with the other Federal and State agencies in the ground water modeling and the Willamette Regional Aquifer System analysis that currently is going on. Some critical ground water areas already exist in this region and more areas will be proposed in the two above-mentioned basin plans.

Continuing and future State efforts will focus on a new statewide policy on water allocation and one on storage of both surface and ground water. In addition, the State will be looking to water purveyors in the Portland area to prepare water conservation plans and to implement them.

The key interest of the commission is the issue of regionalization of water systems to ensure that water is developed in an efficient and environmentally sensitive manner.

The issues of regional water supply have already been outlined by other panel participants. The primary interest of the Water Resources Commission and Department is to assist and facilitate the

provision of adequate water supplies within the parameters established by State policy, rules, and laws.

We recognize that the issues of competing demands for water, particularly related to out-of-stream uses as they affect in-stream values, are of critical interest and will require solutions that adequately address these issues.

Furthermore, any solutions will have to be fully aired in the public arena involving all of those who have a perceived stake.

So, insofar as the Federal role is concerned, I would like to make the following points:

First, the use of Federal lands as municipal watersheds is likely to grow in importance. Oregon has already responded to many of the U.S. Forest Service and BLM plans. The importance of this use is often not adequately reflected in these plans.

These lands must be managed for multiple uses in a manner conducive to ensuring the continued high input/outputs of high-quality water, and this should apply even to the smaller municipal water supply sources.

Federal research efforts on the understanding of land manipulation to water yield could be better and more effort should be placed there.

Second, the importance of the Federal reservoirs in the Willamette Valley for supplying municipal water will increase. Currently, the projects are operated in a manner which enhances their utility for steady supplies as municipal sources.

The Corps is engaged in a Willamette Basin Review Study to answer many questions regarding the operation of the reservoir system and the opportunities to reallocate stored water.

I understand that the scope of this study may have been reduced from earlier discussions, and it is my recommendation that attention be placed on this matter to ensure that the future scenarios for management that would evaluate the enhanced use of reservoirs from municipal supply are included in this study. We understand the Corps has reduced the commitment to this study, and we are somewhat concerned about that.

Third, within the 13 Willamette Valley projects, Federal projects, there is estimated to be about 1.6 million acre feet of water which has been authorized for irrigation but which is currently uncontracted. There is only 40,000 acre feet of water that currently is contracted for irrigation purposes in those projects. It is a minuscule amount of the water that was actually authorized.

In addition, about 547,000 acre feet of water stored solely for flood control may also be of use for municipal supplies. Not all water that is authorized and stored for flood control purposes can be used because it is also tied up in the irrigation authorization. So, you do not want to get caught in double counting.

However, none of these projects contain authorizations for municipal and industrial uses. Within Willamette Valley projects, the issues of water pricing and policy are very complicated, based on a less than concise history of pricing and transfer policy by both the Army Corps and the Bureau of Reclamation.

The striking issue is the disparity between pricing for irrigation water and municipal water in terms of current pricing and full cost replacement. Although this is a larger national issue, it would

seem that some Oregon delegation examination of the Corps and Bureau of Reclamation pricing and transfer policies as they relate to the Willamette projects would be useful.

There is a tricounty study for Yamhill, Polk, and Lincoln Counties that is currently going on because they are having a problem with water supply. They have approached the Corps and the Bureau to get them to give them a price for some of that uncontracted water. They will not give it to them. They will not give them a price, and, so, as a result, they are studying new impoundments that would involve interbasin transfers. We have just adopted interbasin transfer rules which make it very difficult to do interbasin transfers in order to protect the State's interest for out-of-state transfers brought about by the Fortes case.

In addition, some examination of the authorization issue would be beneficial to ensure that uncontracted water can be used for municipal purposes or that transfers to municipal uses from irrigation can occur.

The major issue here would be that the Portland metropolitan area is not forced by a lack of authorization or outdated or rigid pricing policies to develop sources locally that may already be available within existing projects.

Fourth, the Columbia River could be a potential source of municipal supply, and this should be considered in the Federal efforts underway to conduct the Columbia system review of the Federal projects on that system, in the endangered species discussions, and in the efforts to clean up Hanford.

Obviously, if people perceive those sorts of hazards in Columbia River water, that may limit it as a source even if it may not be a real concern.

Fifth, is the possibility of an increased role for the Bureau of Reclamation and the Corps to be involved in regional studies and to act as contractors for new water supply sources.

This is already taking place in the tricounty study being done in Lincoln, Polk, and Yamhill Counties in terms of the Bureau of Reclamation. Again, we are talking about the development of a new supply.

Their expertise in water projects could be very valuable to areas that are attempting to regionalize what currently are inadequate and fractionalized systems.

Sixth, municipal water supply entities need to be involved with the BLM in the preparation of the management plan for the Sandy River scenic waterway. A draft plan is about to be released on that plan, and, to my knowledge, there has been very little involvement in the municipal water supply issue, both upstream and downstream in terms of where the Bull Run diversion occurs.

That concludes my comments.

Chairman WYDEN. Thank you very much. I want to recognize Mr. Kopetski because I know he is on a tight schedule.

Mr. KOPETSKI. Thank you, Mr. Chairman.

I apologize that I will have to leave after my questioning.

Ms. Stickel, you raised a number of interesting points. I wanted you to know first that unless you know the answer, I will go ahead and just write the Corps and the Bureau of Reclamation and ask

them about the tricity, Lincoln, Polk, and Yamhill County, issue, and I will share with you their response.

Ms. STICKEL. I think they would very much appreciate that.

Mr. KOPETSKI. OK. Now, you say in your testimony that it is your understanding the Corps has reduced the scope of a study in terms of the Willamette Basin reservoir system.

Why has it been reduced, and in what fashion?

Ms. STICKEL. My understanding is that initially, there were hopes that study would involve the development of a number of scenarios, where if you managed the reservoirs this way, or that way, or stuck with the release rule that they currently have, that they are departing from, and vary that in various manners, what kinds of beneficial uses could be served.

The costs of doing that are considerable. I mean there is no question that kind of sophisticated modeling is difficult to do, and I suspect it is a financial reason that they have indicated for this, and as I understand it, they are intending at this point to only develop one scenario that just simply looks at the way they currently have been managing the system, and, so, I think the desire would be for them, if possible, to go back and reinstitute looking at least more than one scenario for how those reservoirs could be operated.

Mr. KOPETSKI. I think we will revisit that with the Corps, as well, because I know my agricultural staff person took a tour of the valley and looked at some of these impoundments with Congressman AuCoin's staffers as well, and we are a little bit familiar with this. We are trying to be brought up to speed on a lot of these issues, but it is one of those penny-wise/pound-foolish things where you are only developing one scenario and you ought to be looking at the full range and the entire region drainage system as well.

Ms. STICKEL. There are a lot of gauge stations on the Willamette.

Mr. KOPETSKI. Yes.

Ms. STICKEL. I mean it is not as if you do not have any adequacy of data where they have to go out and collect it.

Mr. KOPETSKI. Ms. Achterman, it is a pleasure to see you again. You have certainly done great service to the people of Oregon and to the water resource issues in your service with the State on the Governor's staff. I am glad you are sort of back home and involved in these issues as well.

I have a couple of questions. One, I do not know if you are following this, either professionally or in your personal interest, but it is my understanding that the Forest Industries Council is coming in with some modifications to the Forest Practices Act in the legislature.

Are they trying to address these issues?

Ms. ACHTERMAN. Mr. Chairman, Congressman Kopetski, their proposal as I understand it, and I have reviewed outlines of the proposal although I have not seen it in detail, is primarily aimed at the question of the riparian rules under the Forest Practices Act, and those are primarily aimed at water temperature, and at fish, and other aquatic organism health issues, not drinking water, and I do not think the Oregon Forest Industries Council at this time, their concept does not address the municipal supply question and does not address any particular forest practices rules for municipal supply. Again, I think in part because a lot of these small systems

that are on these lands are not going to be able to continue to operate the way they have operated historically anyway, and, so, it is not being addressed as part of the Forest Practices Reform effort to any extent that I am aware of.

Mr. KOPETSKI. Should somebody come in from special districts of Oregon?

Ms. ACHTERMAN. Mr. Chairman, Congressman Kopetski, I believe that the critical issue that needs to be addressed is the one that Ms. Stickel raised in her testimony.

I think that water districts and forest land managers, whether they are Federal, State, or private, need to reach agreements on what are the land management practices that are going to be able to occur within the watershed? What is that going to cost in terms of potential foregone earnings for forest practices, for example, on private lands? What is the benefit going to be on the Federal lands? I think that there have been very few instances within the State of Oregon where the landowners and the water districts or the water purveyors have really sat down and addressed in a comprehensive way how you are going to put the land management together with the water delivery.

The Bull Run is probably the only example in which it has been done in a very comprehensive way. The city of McMinnville has a watershed that they own, and then they contract with a forest management company to harvest timber, and they use the timber for revenue purposes.

I could go on. The city of Ashland and the city of The Dalles have designated watersheds on Federal forest lands and formal memorandum of agreement.

The point I would make is the same one we have made in all of our comments on the forest plans, which is identify that the watersheds of municipalities depend on the ground, sit down and write a formal memorandum of agreement that addresses your water quality needs, your water quantity needs for municipal purposes, and what land management practices fit.

On the private end, I think that is ultimately going to be a matter of the districts working with the individual private landowners, and, frankly, it is not high on my list of priorities in terms of where we are going to get the most return in water quality improvement.

Mr. KOPETSKI. It is my understanding the city of Salem does not have an agreement.

Ms. ACHTERMAN. Exactly, and we have noted in the comments on the Willamette Forest Plan that that is a major problem. The Willamette National Forest is carrying out timber management practices on the watershed of the city of Salem, with no communication as near as we were able to tell on how that impacts the city's water system. That is really improper and should not continue.

Mr. KOPETSKI. There is this little Opal Creek on that system that we are going to protect by the end of the next 2 years, and we can watch and see.

It is interesting, Mr. Chairman, and, Ms. Achterman, you probably are the best to have respond to this, that all morning, we listened to the testimony, the whole issue of the salmon and the listing, potential listing of the salmon as a threatened or endangered

species has really not been debated, but it seems to have been talked about this morning, but if there is anything that is going to throw a monkey wrench into more water and water quality, it is the impact of that potential listing.

Ms. ACHTERMAN. Mr. Chairman, Mr. Kopetski, I believe that probably the reason it has not been talked about much is in part a function of, at least on the Columbia, where the discussion has proceeded the farthest, there are not that many municipalities that are appropriating directly from the Columbia and the total quantity of municipal appropriations is very, very, small.

The municipal water use as a fraction of total water appropriation on all the systems in Oregon is a very, very small fraction. The Water Resources Department could give us the number of—so that the impact—it is likely to be there in the future, but it is tough to put your finger on right now.

Mr. KOPETSKI. For example, in Clackamas County, as we know, there is going to be a lot more growth. Growth is going to continue there, and it seems to me one of the ways that we are going to get water is to create it through impoundments.

Ms. ACHTERMAN. Mr. Chairman, Mr. Kopetski, I am not sure that really is the logical first choice in terms of how you get water. I think the water supply study for the region is going to start answering that perhaps more precisely, but what we have seen more frequently, at least in the time, and I guess it is 10 years plus that I have been working actively on water issues in Oregon, what I have seen is more a move to ground water because, in part, of the Safe Drinking Water Act requirements.

Ground water is an alternative supply rather than the municipalities focusing on additional impoundments.

So, I think one of the most important pieces of testimony that I have heard you receive this morning, however, is Ms. Stickel's testimony on what are the purposes for which the existing impoundments exist in the Willamette Basin because without an authorization for the Corps of Engineers to supply water from municipal and industrial purposes, we have a whole lot of stored water. The environmental consequences of that storage have already happened. That is not at this point available for municipal and industrial use, and until Congress authorizes it for municipal and industrial use, we are going to have a lot of municipalities and other water providers out looking for new sources of water with new environmental impacts when, by all that is right and reasonable, one would think that it would make a whole lot more sense for them to be able to buy water from the existing storage projects.

Mr. KOPETSKI. Mr. Tenny, earlier I think, talked about how you can list all these solutions and every one of them is going to have a cost and environmental impact, and just to say that in terms of ground water, that is true as well in terms of the quality issues, in terms of recharging.

I know in eastern Oregon, where I originally came from, they are drawing down that aquifer using water that is 20,000 years old. We are not recharging it, and now we have got the whole global warming going on, and are we going to recharge some of these aquifers.

Ms. ACHTERMAN. Mr. Chairman, Mr. Kopetski, you hit the nail on the head. There is no easy quick fix, and all of the solutions and

alternatives have potential environmental costs, and that is why I think Mr. Hutchison's testimony needs to be kept in mind in these discussions in terms of pollution prevention, and conservation, and looking real hard at existing sources of supply first, and before we think that we are going to be able to develop major new sources of supply.

Mr. KOPETSKI. Mr. Chairman, I really appreciate, as I said at the beginning, this opportunity and commend you on your leadership in having this hearing. I always remember the old eastern Oregon statement that whiskey is for drinking and water is for fighting, and I feel very comfortable that a lot of the battles will be fought in a gentlemanly and ladylike fashion here in Oregon because of the great caliber of people we have addressing these issues today. So, I thank you for this opportunity.

Chairman WYDEN. I thank the gentleman, and I think that this has been an ideal way to kick off the Congress, to have a chance to team up with you. I will have a few more questions, and I know that both of us want to make this available to the whole Oregon congressional delegation.

I just want to thank you for a very helpful contribution and also for being out Oregon way.

Mr. KOPETSKI. Thank you.

Chairman WYDEN. Thank you.

Let me pick up on the salmon issue with a concrete case because we have not talked much about the salmon. Let us talk about it in the context of, say, the Sandy River.

The Sandy is fed by the Bull Run and the Little Sandy. Do you think there are going to be conflicts in the Portland area between water withdrawals and instream flow protection? There is one real live issue on a real river right now, salmon protection versus our constituents' drinking water.

Is that a conflict?

Ms. STICKEL. Yes; it is going to be a conflict. It already has manifested itself in numerous ways. I mean it was the genesis of the Diack decision itself, which sort of centered on that whole issue of where is the appropriate place for the weighing and balancing for providing instream resources.

The issue is exceedingly complicated on the Sandy system, however. I mean much more complicated in some ways than in other systems, because in essence there is a Federal reserve right that exists on the Bull Run system that was established, as you know, by Congress, which happened to occur about the same time that Oregon instituted the Western Appropriation System.

The scenic waterway statute came along in the middle—when was the Sandy designated, 1974?

Mr. HUTCHISON. I think, yes, 1974.

Ms. STICKEL. 1974. There are a number of rights that have been issued even upstream of the Bull Run-Little Sandy system that also predate that. The city of Sandy has 23 CFS water right which they have never utilized out of the Salmon River system that just predates the scenic waterway statute. Also, 1973, and then, of course, there is all the issues that Gail mentioned about these small systems that appear to have no water rights associated with them, and, so, of course, if they get an established priority time, it will be

later in date. So, yes; there is an issue, and we are well aware of that, the State is aware of it, and the Portland Water Bureau is aware of it.

Clackamas County has now become much more aware of it than they were just a few months ago, and I think that I would be hopeful that all of the parties, by working together, could ensure that whatever uses are made of that system, that we maximize it for all of the beneficial uses that exist.

It is a beautiful river system and deserves to be protected for instream purposes.

On the other hand, it is the source of the most relied-upon municipal water in the Portland metropolitan region.

Chairman WYDEN. Gail, did you want to add something?

Ms. ACHTERMAN. I would just add one brief note, if I could, Mr. Chairman.

In terms of the current salmon summit proceedings and the current listing petitions for the National Marine Fisheries Service, I am less concerned about the Sandy and the Sandy River Basin simply because it is downstream from Bonneville and the stocks that are of primary concern in the current listing petitions tend to be lower Columbia stocks and upper Columbia/Snake stocks, and not a specifically Sandy Basin stock.

Now, I am not knowledgeable enough about fisheries biology to know whether there is an indigenous Sandy/Salmon River basin stock that might be petitioned for listing or some other aquatic organism in the river system that could be petitioned for listing.

So, I think I agree with Lorna that the challenge of meeting the instream demands on the Sandy is very much a problem that needs to be kept in mind as one plans for municipal water supply in the Portland area, recognizing it is a major source of supply.

I do not see the current salmon listing petitions as being directly a challenge or controversy vis-a-vis the Sandy or the Salmon, and I have not heard any of the participants really talking about it in that context. I think it is just because it is below Bonneville and the specific stocks that are being dealt with.

Chairman WYDEN. Bill, did you want to add anything?

Mr. HUTCHISON. I have a couple of points to make on that specific issue. Some of the panelists who addressed the City Club last Friday did mention that one of the realities is that some of these species may not be retrievable and that will mean maybe an increasing emphasis on species that can be enhanced and preserved.

So, I think there is a potential as Congressman Kopetski was suggesting. I think we need to look at this holistically, and I think the writing is on the wall. The Endangered Species Act should be the first smoke signal that we really need to drive this whole agenda of conservation and care because the Columbia, as Ed Tenny suggested, might apply to the Willamette, may end up being a direct source of drinking water. It certainly must recharge the well field that the city has developed.

Then just quickly on the Diack issue that Lorna Stickel referred to, that case arose out of this question of whether or not the city can divert the Bull Run, which is the Sandy's best water, to turn on lights, essentially, as a source of electric power. The court was

clear about that, that the Bull Run can be appropriated for municipal water supply purposes.

So, in alluding to that in my testimony, and in featuring this case note issue, I just mean to suggest that whole system has requirements for water that should send a signal that the Bull Run is threatened and endangered in a way itself as a panacea for the region's growth requirements.

I would suggest it has real limitations and that when you talk about true costs and you talk about economy, we have to get better at building everything into that equation, and that is the wonderful economic value that that whole scenic corridor provides for this region beyond the mere cost of other fixes.

Chairman WYDEN. Those are thoughtful comments all of you have. I only brought the situation up because I thought that was a real concrete kind of case. We talk about salmon in the abstract, but the fish need water flows, and we have certainly gotten reports about the salmon and the steelhead on the Sandy.

Mr. HUTCHISON. I am sorry. I forgot to say one thing, Congressman. This is rude to do, but I just would say that case has driven this whole process of analyzing what the requirements of fish, wildlife, and recreation are in all of these scenic corridors.

So, the ripple effect in Oregon will be very profound along the lines that you are mentioning.

Chairman WYDEN. One question for you, Ms. Stickel and Ms. Achterman.

Do you think there is going to be enough ground water in the Portland area to tap when and if that is necessary?

Ms. ACHTERMAN. Maybe I will start off, and I think Greg Pettit might have some important observations on this, too.

Mr. Chairman, my response to that question, based upon the 4 years I have been working on the strategic water management group and my water resources commission experience, would be no.

I think you are going to have a very hard time finding a sufficient amount of ground water in the Portland metropolitan area that is uncontaminated to be able to meet municipal supply needs.

It is just going to be very tough. It would be my broad reaction. Now, Greg and Lorna may both have more specific—

Ms. STICKEL. Let me just throw in one thing. Some earlier testimony mentioned the possibilities for ground water recharge.

That is an area I think is relatively unexplored in this region. It is certainly not unexplored nationally. Within Oregon, there are some examples of ground water recharge projects, not very many, but some, and the city of Seattle is examining that very issue right now in terms of using high winter flows that are excess to needs for other purposes, to take those flows, put them in some area in the ground, where you have two major issues that always have to be addressed whenever you are talking about recharge. One is quality, and I would defer to the DEQ folks on that issue, but I could tell you water resources rules and requirements are that the quality aspects have got to be addressed whenever recharge is addressed.

The second major issue is the structural one, to make sure that the water that you put in there truly will stay there. I mean it is not like putting it in a reservoir in the ground quite. It has a habit

of leaking out. Your knowledge of where the joints and the fractures are that might leak it away, or that you can actually know that of what you actually put in, how much of that can you really take back out of the ground because some of it escaped or mingled with other water that other people rely upon or whatever.

So, I think recharge might be the one area where ground water can be looked upon.

Chairman WYDEN. Why do we not say for the record if you could supply some information about recharge issues?

Mr. PETTIT. Mr. Chairman, I just would like to add that I think one of the important reasons to look at ground water is in the State of Oregon, we estimate about 90 percent of the available fresh water is ground water. All our surface water streams tend to be overallocated currently.

The ground water resources in the State are not utilized anywhere near their existing potential. Now, in the Portland area, the aquifer in East Multnomah County has a tremendous aquifer. It has a tremendous potential for yielding large quantities of water. Natural water quality is extremely good. The existing water quality in the aquifer is also good.

The basic fear is that if that aquifer is used intensively, that the contamination that is currently shallow in the system will be drawn down into the aquifer and potentially contaminate the wells. Perhaps some kind of remedial activity might take care of that threat. Also, I am sure the city of Portland is looking at treatment options.

So, there are a lot of options on how we resolve that problem, but the point is there is a tremendous quantity of high-quality ground water available in the Portland area if it can be used.

Chairman WYDEN. I share that view, and I think you all are aware that there has been concern that when Portland area systems have tapped ground water, they have sometimes found contamination. Milwaukee District is an example of such a situation. So, I think you all are trying to strike the cautionary notes that are warranted and that is good.

A couple other questions. On this question of Federal land management, and I am not going to try to cause controversy and all that, but I sensed a little bit of a difference between Ms. Stickel and Ms. Achterman on it.

Gail, my sense was that you were saying since most systems are going to come up with some treatment process anyway, Federal timber and land management practices are not the same concern that perhaps Ms. Stickel saw.

Ms. ACHTERMAN. I think, Mr. Chairman, if I could respond, I do not think that Lorna and I do have a disagreement on this. I think that what you need to do, though, is to distinguish between—my testimony was primarily aimed at the problems we faced on the State level on State and private lands, not on Federal lands.

On Federal lands, though, I think you need to distinguish between the large municipal systems and some of the small systems. On the Willamette National Forest, my vague recollection is that there are over 75 water systems whose watersheds are on the Willamette National Forest, and they range from the city of Corvallis and the city of Salem, sophisticated, fairly large water operators

and providers, who have treatment systems in place, to very small community water systems that may only serve 10 or 20 homes, if that, and our recommendation, when I was with the State government, was that for all recognized and regulated water providers, that the Willamette National Forest should enter into memorandum of agreement with the water provider regarding the land management practices and not just do it on the federally designated watersheds, like, I think, the city of Corvallis watershed or the city of Toledo watershed.

My testimony was going to the point that on some of the smaller community water systems, where only a few homes are served, those systems are probably not going to be able to continue to exist the way they have historically because they will not be able to meet Safe Drinking Water Act requirements, and it is in those areas where I think you have really got to ask yourself a question of how much modification and forest practices do you want to undertake if they are going to have to redesign their system to perhaps connect it to another system and abandon their source on the forest lands.

I think that the policy ought to be to let us get the land management practices worked out in conjunction with the water providers, but as we do that, let us distinguish between the very small systems that might not continue to rely upon supply on forest lands for other regulatory reasons and the larger systems that clearly are going to continue to be dependent on water supply from Federal lands and continue to be impacted by timber management practices.

Chairman WYDEN. Lorna.

Ms. STICKEL. Yes; I do not think that Gail and I differ an incredible amount. Every time we have a commission hearing, usually there is always somebody in the audience who comes up and says I have this problem, and they will talk to you about a problem that they have, and usually it is one of these smaller systems, but I think that the issue for the small systems is really a tough one. I think fostering the communication, just a recognition on the part of the Federal agencies, that these people's life blood is wrapped up in these small systems, and they may not have any other alternatives.

I understand regionalization can provide an answer for some, but for some of these systems, there is not going to be any other option for them, and I think in those cases, it really is incumbent to make sure that there is a connection. One of the things that was not mentioned here, I believe, is that there is a connection between the Clean Water Act standards and the Safe Drinking Water Act issues. At the last Western States Water Council meeting in Tucson, there was a gentleman there from one of the Southern California large systems who was talking to this EPA assistant to the assistant to administrator of EPA. They are preparing some issue papers about the reauthorization of the Clean Water Act, and one of them is called the dry weather flow paper, and it talks a lot about quantity, and this gentleman raised the issue that there is a connection to some degree with Clean Water Act standards as they relate to upland management in terms of the kind of water that

gets down to the intakes for these water systems, and there is a relationship oftentimes between the standards that are set.

Sometimes, they are actually in conflict with each other in the sense of one causing a problem for the other when it comes to treatment, and I think that this connection is not always well understood. I think, in the Clean Water Act reauthorization, there may be some room to look at that.

That perhaps was not what you were asking, but there is a connection there.

Chairman WYDEN. Right, I think it is a good point to add, just in terms of staking out some principles by which Congress ought to look at these issues. These statutes ought to be consistent with each other.

Just a couple other questions, and I know we have been going on a long time. We will let you wrap it up.

How many rivers are actually overappropriated? Everybody has been referring to this problem—there is overappropriation. I want to make sure that also there is kind of a generic definition of it.

As I understand overappropriation, what it means is in the time of heavy use, you have too many claims for too little water. Is that it essentially?

Ms. ACHTERMAN. Mr. Chairman, that is a good basic statement of it. I think if somebody says something is overappropriated, you have to say overappropriated when. There are a lot of streams in Oregon that may be overappropriated in August, September, and October, too many claims for the amount of water. So, if everybody took their claims, you would run out of water in the stream.

In the winter, everybody could take all the water they wanted and you would not run out or that they had a claim to. So, yes, that is a pretty good working definition, but you just have to recognize it is seasonal. You have to ask it in a time context.

Chairman WYDEN. So, seasonally, Lorna, are there some numbers about how many are overappropriated? Are we reaching a point where, like Mike Kopetski said, I think very well, folks are going to be up in arms and going to feel like going to the barricades?

Ms. STICKEL. Right. We have been wrestling with that for about the last 8 years as society is getting more vocal about their demands for both the basic understanding of the resource and recognizing these other uses are as important.

I do not have an answer for you. We will have an answer, though, relatively shortly. When the department went to the emergency board last time for stream flow restoration coordination positions in most of the regions of the State, they got their requests cut back, but they did get two things.

First, they got a stream flow restoration coordinator in John Day Basin as a demonstration, and, second, they got a position to look at water allocation statewide, and we have been cranking through a water allocation model that will help develop exactly the answer to the questions that you are raising, which ones truly are overappropriated, and kind of accept a definition of what that really means, because not only is there a seasonal issue about overappropriation, there is a frequency issue about overappropriation.

Is it 80 percent of the time it is overappropriated, 50 percent of the time, 40 percent of the time? I mean it will differ all over the map about what they mean about overappropriation.

We generally tend to look at 80 percent as pretty well overappropriated because that means 80 percent of the time there is not enough water there or, actually, it is the reverse, 80 percent of the time there is enough water there. Then we work back from that, but we will be updating over the next 2 years every basin plan in the State, and there are 17 or 18 of them to reflect this issue of maybe it is time, and we have already done this in a number of a streams, I might add, withdraw them and just say it appears at this point there is not enough information about water availability. There is not enough water available, that our information would indicate there is not, and we will just close then and not take any more applications in the door.

We have already done one thing in the Malheur Basin where this whole water availability issue appeared to have been answered by an earlier study, and in that case, we said we are going to shift the burden. It no longer will be the burden of the State to demonstrate whether water is or is not available in the granting of a permit. We are going to shift the burden to the applicant and say you must prove that water is available before we will even consider the granting of a permit, and, so, those sorts of burden shiftings or withdrawing them entirely. Stupid long-winded answer, but I do not have an answer.

Certainly in eastern Oregon, the majority of them would be overappropriated by most people's definition during certain times of the year.

Chairman WYDEN. We are short of time, and I wanted to give you, Bill Hutchison, a chance to touch on one point that you made that I think has run through this hearing for about the last 3½ hours.

You said prevention is the name of the game. We have a lot of concerns now where we are essentially playing catch-up ball, trying to figure out how to address these issues, and I think your point about technology forcing and the like makes sense.

You have several Federal statutes coming up, and I will come back to two that we have been talking about today, Safe Drinking Water and the pesticide statute, FIFRA. Why do you not, if you can, give us a couple of specifics about how we could build a preventive agenda in to those statutes that are coming up?

Mr. HUTCHISON. I might have to defer to Greg.

Chairman WYDEN. OK.

Mr. HUTCHISON. Greg had some specific answers to that. It is a terrible thing for an answerer to do.

Could I have 15 seconds on the question? I did not get the answer a second ago. My slant on the answer to the question that you just posed is that almost every stream is probably overappropriated and we do not know. Oregon has the most free-flowing rivers probably of any State in the Union; most scenic miles, I think, too.

By the time that is built back into the system, the question you need to ask is, when everybody needs the water, the fish, the recreaters, the farmers, the irrigators, the drinkers, can the river support them? The answer in many, many cases is no.

So, I get back to my point about conservation and driving technology.

EPA, as you probably know, and Senator Moynihan, I think, just had hearings about this, and has just adopted a pollution prevention sort of strategic plan, and its scientific advisory board has put forth a relative risk document, and it has indicated that its regulatory priorities are going to be driven by a relative risk analysis, and by a pollution prevention sort of philosophy.

The EPA people will tell you they will operate only at the margins at first, and Moynihan, I think, observed it is going to be years before we fully feel the effects of this.

I think we definitely have problems as you look at reauthorization for Safe Drinking Water, Clean Water, and RCRA. We do have a need to coordinate and make consistent in terms of specific opportunities for prevention. I am without portfolio this morning. I do not quite have that well enough in mind to speak.

Greg, do you have some ideas?

Chairman WYDEN. Well, we will hold the record open on that.

Mr. HUTCHISON. That is a good idea.

Chairman WYDEN. I think that your assessment is a sound one, and I think now we are going to have to move quickly if we are going to have an Oregon agenda as it relates to water that is prevention-based. Mike Kopetski and I are going to have those bills coming at us quickly, so if you could get your people together and say you had a couple of Members, and they are interested in these prevention issues, perhaps you could generate some specific suggestions.

This has been very helpful. It is amazing, once you get into this, how many bases you actually touch. I was pleased, Gail, you brought up the underground storage tank issue. That is something that I have made a real priority for this upcoming RCRA reauthorization because that has been the longest running battle since the Trojan War.

The problems are not going away. It is a small business issue, it is a water issue, it is an environmental issue, and we have to understand that tackling these kinds of questions involve bringing a lot of different players to the table and getting on with it.

You all have been very helpful and very patient in terms of sitting through 3½ hours. Obviously, we are going to need to move quickly, so, we will hold the record open, and we are going to await your further suggestions and specifics. Unless you have anything further you would like to add, we will adjourn at this time.

[Whereupon, at 12:50 p.m., the committee was adjourned, subject to the call of the Chair.]

APPENDIX

OPENING STATEMENT
CONGRESSMAN RON WYDEN
HOUSE SMALL BUSINESS COMMITTEE
DRINKING WATER FIELD HEARING
FEBRUARY 11, 1991

Today the committee convenes in Portland to inquire into concerns that metropolitan area communities may run out of Oregon's traditional supply of soft, pure water.

The evidence suggests that abundant supplies of pure water are something that Oregonians can no longer take for granted. In the year 2000, our community will be different -- more people and more industry -- and this growing population will have a large thirst to quench.

Providing drinking water is usually a local responsibility, but like so many other issues, the federal government has a hand in it. Federal agencies help manage the watersheds that hold the Bull Run, the Clackamas, and other rivers we tap for water. Federal regulations under the Safe Drinking Water Act set the standards for purity. Federal clean water and hazardous waste laws are supposed to safeguard our surface and ground water. And federal money helps states and localities implement pollution laws.

The federal "force" has not always been with us. In the past, the federal government has talked of forcing hugely expensive filtration programs on Bull Run water, even though the purity levels meet public health standards. Some EPA proposals to reduce lead in drinking water could harden our water -- when other approaches could meet public health concerns as effectively. Often, federal statutes simply go in opposite directions, leaving state and local officials frustrated and uncertain about their obligations to the public.

Congressman Kopetski and I are here because we believe the federal government can be a better partner in helping Oregon meet its water needs. As a member of the Energy and Commerce Committee, I will have the opportunity this session to help rewrite the Safe Drinking Water Act and the Resource Conservation and Recovery Act. As a member of the Agriculture Committee, Mike Kopetski will be addressing ground water, pesticide use, soil conservation, public lands management, and numerous other practices that will affect water quality. Several other members of Oregon's congressional delegation sit on committees that will also provide them an opportunity to affect water policy.

As we go forward, I hope we can agree on some guiding principles for the federal role --

-- Though we demand high standards to protect the public health and the environment, we must maximize flexibility and minimize red tape in federal rules.

-- We must make the various federal programs as consistent as possible, so the right hand works with the left, and so state and local officials aren't pulled in two directions at once.

-- We must make the federal programs as cost-effective as possible, directing our limited resources to give us the most for our investment.

-- We must make federal regulators in Washington sensitive to the unique problems and resources in Oregon -- so they understand the burdens and the benefits of programs for localities, businesses, and ordinary people.

This hearing ensures that Oregonians get an early start in voicing their views about our water, the life blood of our future. We must move forward. Our drinking water systems need to be modernized. New testing requirements are coming on line. State officials indicate that costs for the changes now staring us in the face, changes that challenge our heritage, will cost \$1.4 billion. At a time when budgets everywhere are strapped, everyone knows how tough it will be to generate the new funds to address these issues.

By working together we can keep our corner of the world a special place. And that's the point of this hearing.

OPENING STATEMENT OF CONGRESSMAN MIKE KOPETSKI
COMMITTEE ON SMALL BUSINESS
FIELD HEARING ON PORTLAND'S REGIONAL DRINKING WATER SUPPLY
FEBRUARY 11, 1991

MR. CHAIRMAN, I WANT TO COMMEND YOU FOR HOLDING THIS HEARING. YOUR WORK IN THE LAST DECADE TO CONVENE A COMMITTEE OF OUTSIDE EXPERTS TO REVIEW THE QUALITY OF OUR WATER IN GENERAL AND THE MANAGEMENT OF BULL RUN IN PARTICULAR IS WELL KNOWN. THIS EFFORT NOW GIVES US THE FOUNDATION TO PREPARE FOR THE CHALLENGES OF THE FUTURE.

WE IN THE PORTLAND AREA HAVE BEEN EXTREMELY FORTUNATE TO HAVE A CLEAN WATER SUPPLY WHICH IS READILY--AND EASILY--ACCESSIBLE. HOWEVER, WE ARE FACED WITH A GREAT CHALLENGE IN COMING YEARS: PROVIDING THE CLEAN, SAFE DRINKING WATER WE NOW ENJOY--EVEN TAKE FOR GRANTED--TO A GROWING POPULATION.

IF TRENDS CONTINUE, THIS REGION'S POPULATION WILL DOUBLE IN THE NEXT HALF-CENTURY. AT THE SAME TIME WE WILL BE BURDENED WITH THE COST TO INCREASE SUPPLY, THE FEDERAL GOVERNMENT IS RECOGNIZING AN INCREASED THREAT FROM MODERN SOCIETY'S CHEMICAL CONTAMINANTS TO OUR SAFE DRINKING WATER.

AND WE WILL HEAR OVER AND OVER TODAY ABOUT THE GREAT COST OF TESTING AND FILTERING FOR THESE CONTAMINANTS. ESTIMATES ARE THAT THE COST TO RATEPAYERS FOR INCREASED WATER SUPPLY AND IMPLEMENTATION OF NEW SAFETY REGULATIONS WILL RUN AS HIGH AS \$1.4 BILLION OVER TEN YEARS.

THIS HEARING COULD NOT BE MORE TIMELY. THE GOVERNOR'S DRINKING WATER TASK FORCE RECENTLY RELEASED ITS REPORT ON PROVIDING SAFE, DEPENDABLE DRINKING WATER IN THE 1990S. AT THE FEDERAL LEVEL, REAUTHORIZATION OF THE CLEAN WATER ACT AND THE FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT ARE EXPECTED IN THIS SESSION. WE WILL BOTH BE BUSY--YOU ON THE ENERGY AND COMMERCE COMMITTEE; ME ON THE AGRICULTURE COMMITTEE--ON CLEAN DRINKING WATER ISSUES. I AM LOOKING FORWARD TO WORKING WITH YOU AND THE OTHER MEMBERS OF OREGON'S CONGRESSIONAL DELEGATION TO ENSURE A COST-EFFECTIVE, SAFE DRINKING WATER SUPPLY AVAILABLE TO OUR--AND I WOULD EMPHASIZE, MR. CHAIRMAN--VERY SPECIAL CORNER OF THE WORLD.

THANK YOU FOR INVITING ME TO THIS VERY IMPORTANT HEARING.



CITY OF

PORTLAND, OREGON

BUREAU OF WATER WORKS

Mike Lindberg, Commissioner
 Edward Tenny, Administrator
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Hearing on Portland Regional Water Supplies
 Representative Ron Wyden, Chair
 Testimony by Ed Tenny, Administrator, Portland Water Bureau
 February 11, 1991 - Portland, Oregon

Good morning, Representatives Wyden and Kopetski. My name is Ed Tenny. I am the Administrator of the Portland Water Bureau. Mike Lindberg, Portland City Commissioner in charge of the Water Bureau, was unable to join us this morning due to the City's budget hearings. He asked me to convey his appreciation for this hearing and for the interest in water supply issues which it demonstrates. I'm very pleased that you have taken the time to address the issues before us today.

The Portland Water Bureau is a regional water utility providing drinking water to about 700,000 Oregonians. In addition to serving the 420,000 citizens of Portland, we wholesale water to 22 cities and water districts in Multnomah, Clackamas, and Washington Counties through long-term contract agreements. Under Public Law 95-200, we participate with the U.S. Forest Service in the management of the Bull Run watershed. Many believe that this water source provides the best drinking water in the United States; it is almost certainly the most carefully protected major municipal watershed in the country.

While we in the Pacific Northwest have been blessed with a relative abundance of high quality water, we recognize that this supply is not unlimited. The

strong environmental values which most Oregonians share places an increasing value on in-stream flows of water. We all want to preserve and enhance the scenic, recreational, and wilderness values which make our quality of life the envy of so many. At the same time, we are experiencing significant population growth in the Portland metropolitan area---growth which we believe will continue in the future. Ever more stringent water quality standards are also placing an increasing premium on first class water supplies while, at the same time, mandating that more water should remain in streams. These factors combine to make the challenge of providing water for the future Portland metropolitan population very serious indeed.

To meet this challenge, the Water Bureau has embarked upon a series of major studies. Our study area extends through what we call the water region---from Clark County, Washington in the north to Newberg in the south and from Hillsboro and Forest Grove eastward to the Bull Run. Over the next 24 months, we expect our studies to provide answers to these questions: How much demand for water must we anticipate in the next generation? What are the best available sources of supply which could meet this demand? How can these supplies be utilized most efficiently and effectively while protecting the region's environment? What are the legal and institutional impediments to rational solutions and how can they be overcome? What kinds of cooperative efforts will be necessary to make best use of our water while minimizing waste? We are not conducting these studies in isolation. Virtually every

water provider in the study area is cooperating in generating data. We are sharing all of the draft studies and information with all water providers and interested agencies. We chair regular meetings of the major water suppliers from around the region where opportunities and problems are aired and addressed in a cooperative fashion. And Mike Lindberg, the Commission in Charge of our bureau, has appointed a high level citizen advisory committee, chaired by Mr. Lloyd Anderson, to advise us at each step.

The first in our series of studies is a Water Demand Study. This project will forecast water demand for the study area to the year 2050. We are reviewing the data now and expect to have a final report within 30 days. This morning, I can share some overall conclusions with you with the understanding that some refinement of the numbers may still be necessary. These highlights seem clear, at least as trends:

1. The study area now has a population of 1.28 million. By 2000, this number should be 1.42 million and then population is forecast to increase to 1.70 million by 2020 and to 2.0 million by 2050. This indicates growth of 55% by 2050.

2. Average daily water supply needs will increase by 45% between now and 2050, from 202 mgd (millions of gallons per day) to 293 mgd. This brief table summarizes this growth in millions of gallons per day:

	Average Use		Peak Day Use	
	<u>1990</u>	<u>2050</u>	<u>1990</u>	<u>2050</u>
Portland	91.63	96.81	146.61	154.90
Portland Customers	36.57	59.53	77.02	124.70
Other Oregon	48.29	89.92	115.36	216.65
Vancouver/Clark PUD	25.59	46.91	52.60	96.17
Total	202.08	293.17	391.59	592.42

4. Many areas where high growth is anticipated are already at or quickly approaching their existing available water supply (Northeast Clackamas County, Southern and Western Washington County, Clark County).

5. Regional water supplies can meet average demand requirements even to the year 2050. The supplies cannot meet the peak demand which occurs due to the summer combination of low river flows and high demands.

6. There are three major water supply systems on the Oregon side today which

provide a total combined capacity of 331 mgd. (225 mgd from Portland, 70 mgd from the Clackamas River, and 36 mgd from the Joint Water Commission of Hillsboro, Beaverton, and Forest Grove.) The current average daily summer use for the region is estimated at 304 mgd, increasing to 425 mgd in 2050. Peak day water use for the region is now 392 mgd, growing to 592 mgd by 2050.

7. Without a combination of conservation and increased water supply, the available water supply from reliable surface water sources will not meet the region's projected summer water needs by the year 2000. System capacity is already exceeded on peak use days. Even with an aggressive conservation program that would reduce average peak season use by 10% between now and 2000, new water supplies will still be needed by 2010 unless groundwater supplies can be reliably used more extensively than in the past.

These preliminary findings make it clear that there is much to be done. There is no question that additional water supplies must be developed; the question is, rather, what future water supply strategy will best meet the region's needs. In order to answer this question, we have begun a major Supply Options Study which will review every reasonable supply alternative in the region. The goal of the study will be to provide a short list of the half dozen or fewer supply option which deserve detailed analysis. We expect to have that short list by early Fall of this year. At the same time, the Water Bureau has also begun development of a major, ongoing water conservation plan designed to

educate the public and to change wasteful habits with regard to water use. We believe that water conservation is a part of our responsibility as stewards of a critical natural resource. We will not seek to develop additional supplies in order to provide for waste. Elements of our conservation plan should be in place this summer.

I know that your time is limited this morning, so I won't go into more detail now on the extensive range of related studies and projects underway. We will be in close contact with your staffs to ensure that you are kept informed as we gather more information. In the meantime, I would like to touch briefly on a few specific areas in which your influence and leadership on the Federal scene will be very important to us:

1. The Safe Drinking Water Act and the Clean Water Act are both coming up for reauthorization. Both address important goals which we support. However, we are extremely concerned that these critical measures not mandate heavy financial burdens on our ratepayers in return for minimal health benefits. A balance must be maintained. Your attention to and support in these key reauthorization discussions will be of great value to all of us who serve the public in the water field. In this connection, I would like to thank you, Representative Wyden, and your staff for the strong support you have given us in the past in this respect. Particularly with regard to the regulation of lead in drinking water, your participation was instrumental in crafting

regulatory strategies which protect the public health without placing unrealistic burdens on our ratepayers.

2. There is now much talk about a Federal tax on drinking water to fund various programs, particularly in the area of Clean Water Act implementation. We hope that you will help us convince Congress that this is a poor idea. More than 20 states, I believe, already have some form of water tax to fund a wide variety of State programs. The idea is being discussed in Oregon. There are serious equity issues involved. Water rates are often perceived as an easy "deep pocket" to finance programs without giving enough consideration to the need to pay for the water system's own needs. As you know, the need to meet both future supply and water quality requirements will be expensive; the dedication of our rate elasticity to Federal programs will make it more difficult to meet our needs at home.

3. One key potential source of supply which we'll be studying is the Willamette. I understand that there is a very substantial amount of unallocated water associated with Federal impoundments on the Willamette. When these Federal projects were constructed, no supply increment was assigned to municipal needs. We would like to explore the possibility of making some of that unallocated water available for municipal needs in our region at affordable cost. This is an area in which your help would clearly be critical. I am not an expert on this issue, but other speakers on your agenda

today will address this issue in more detail. We think it is a very important one.

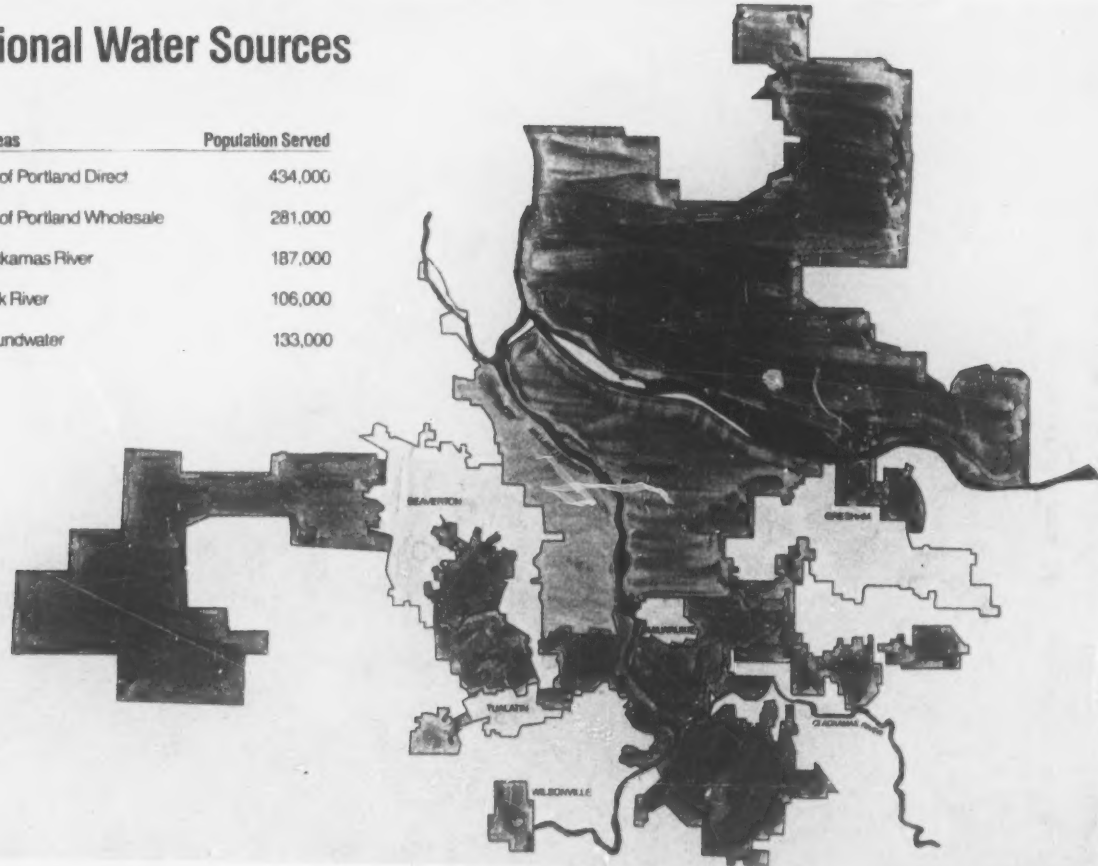
4. Finally, in a more immediate vein, we are strongly committed to water conservation. Representative Chet Atkins has advised us that he will be introducing a bill in the House this session to mandate water efficient plumbing fixtures. This will be known as the National Plumbing Products Efficiency Act. We have studied the issue of water efficient fixtures at some length and believe that today's technology makes them practical, affordable, and desirable. The Water Bureau is actively supporting a bill in the Oregon Legislature which would mandate them at the State level. We respectfully request that you consider co-sponsoring Representative Atkins' bill in the House of Representatives.

Today, responsible water utilities must be far more than the competent public works organizations of the past. Our task is to be careful, responsible stewards of a critical natural resource. Our challenges are many and complex. We believe we can succeed in meeting our future needs in ways which are responsible, compatible with sound environmental values, and affordable. In order to do so, we will need the positive cooperation of everyone involved. Your support for thoughtful analysis, careful decision making, and for solutions which serve the public best have been important to us in the past and will be critical in the future. We are most pleased that you have

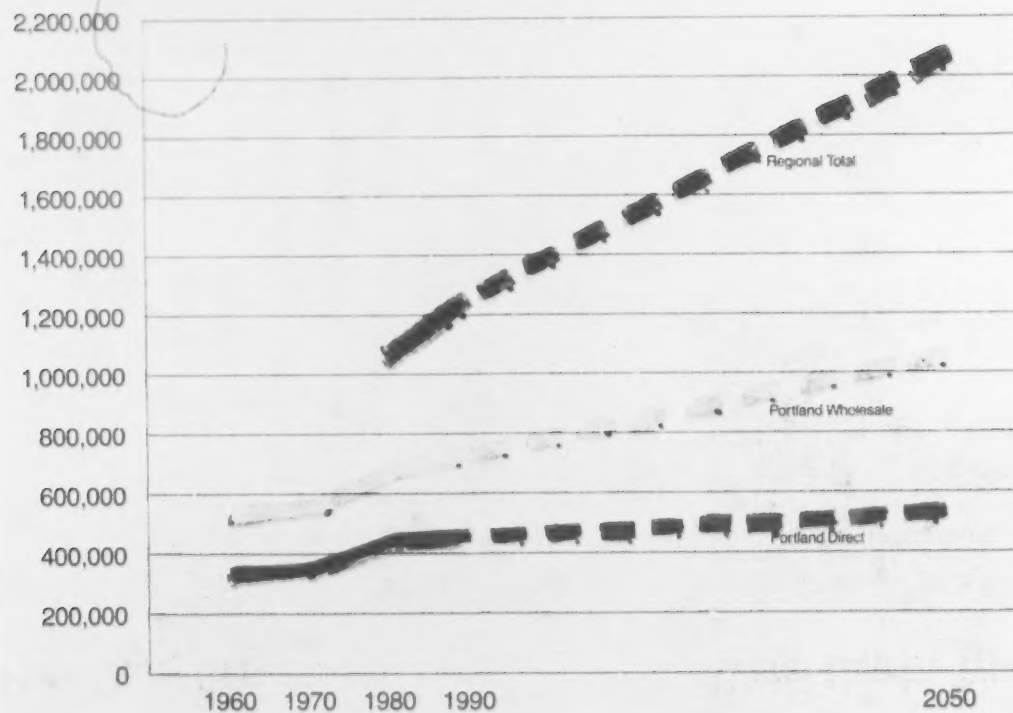
demonstrated once again your commitment to these issue through this hearing.
I will be glad to address any questions you may have.

Regional Water Sources

Service Areas	Population Served
 City of Portland Direct	434,000
 City of Portland Wholesale	281,000
 Clackamas River	187,000
 Trask River	106,000
 Groundwater	133,000

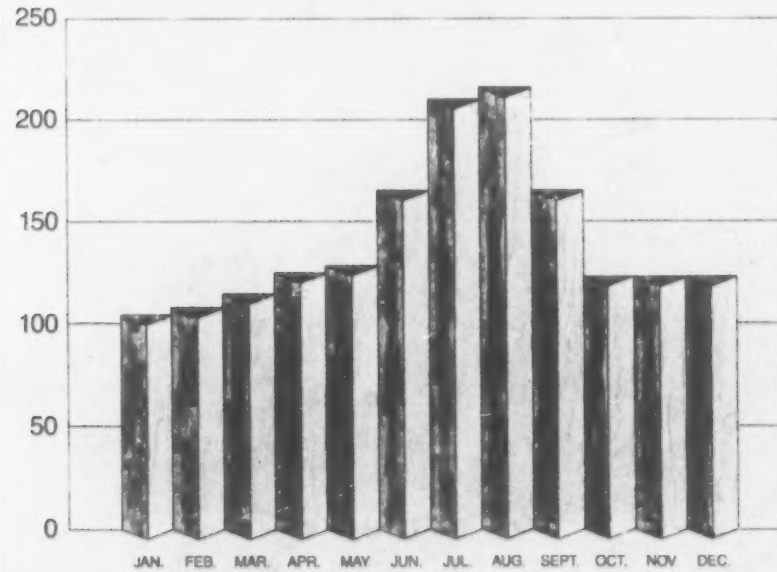


Regional Population Growth

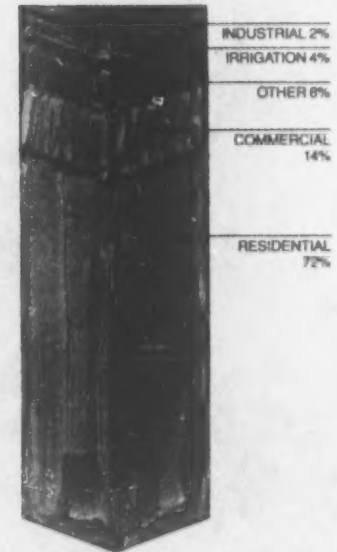


1990 Peak Daily Demands

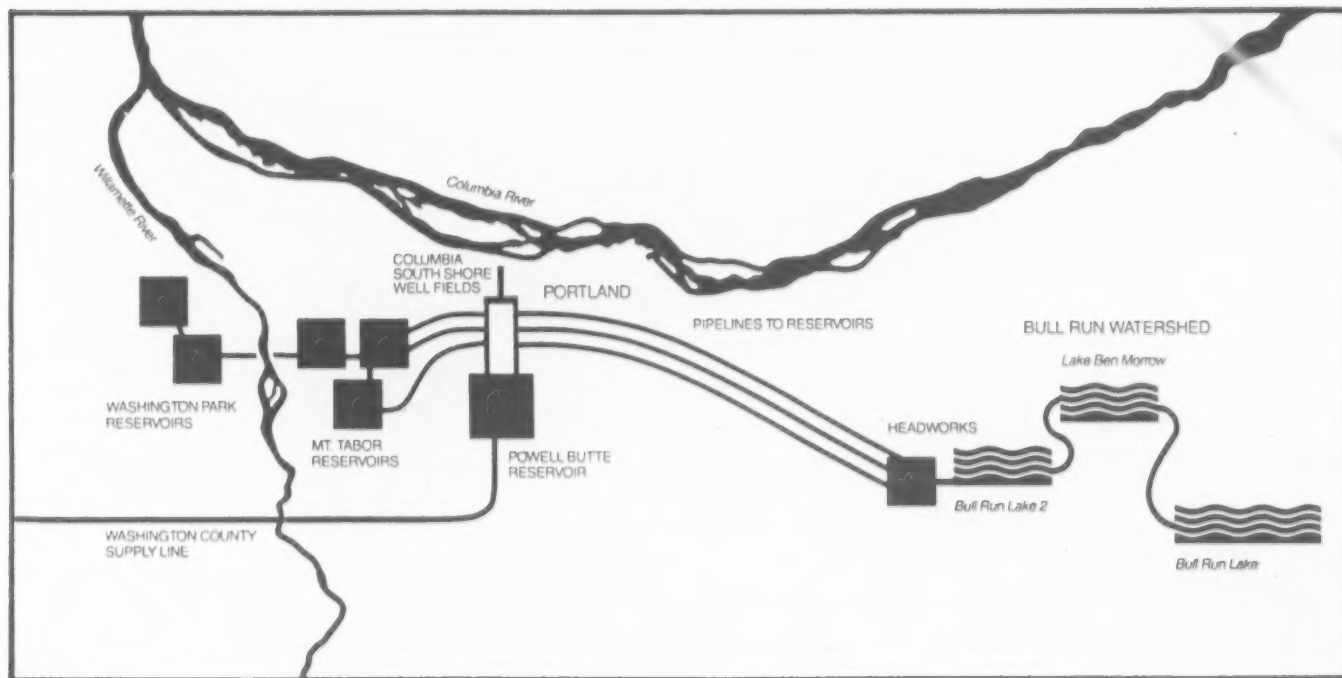
Millions of gallons per day



Water Use by Type



Portland's Regional Water System





CITY OF GRESHAM

Community & Economic Development Department
 Engineering Division
 1333 N.W. Eastman Parkway
 Gresham, OR 97030-3813
 (503) 661-3000

February 11, 1991

Congressman Wyden and Congressman Kopetski:

My name is Greg DiLoreto; I am the City Engineer for the City of Gresham. Since 1905 the City has purchased water from the City of Portland Bureau of Water Works. In addition to the Bull Run source, we have access to Portland's Columbia River well field during emergencies or high-demand periods in the summer. Our current annual metered consumption is 200 million cubic feet. We anticipate our growth to be 2% per year during the next 5 years. It is our understanding from the City of Portland that they will be able to supply the City of Gresham with water through that period.

With respect to water quality, tests conducted by the City of Gresham in accordance with the safe drinking water regulations show water samples from various taps in Gresham to be in compliance with those regulations. That in turn gives us confidence in the City of Portland's ability to meet the safe drinking water regulations. We are concerned about the possible requirement of treatment of water from the Bull Run Water Shed. This requirement could impact our water rates an additional 3 to 5% per year on rates which are already increasing from 5 to 7% per year.

As a member of the Bull Run Water Advisory Board, we are working with the City of Portland on this issue of treatment. We support Portland's actions and endorse their efforts to participate in the regulatory development process. We agree that whatever regulations are developed now and into the future be based on the best available scientific information that will assure that both the national and state regulations reflect the unique circumstances of the Portland water system. We also support the scientific and engineering studies conducted by the City of Portland to identify the most efficient and effective options for improvements in Portland's water treatment processes and facilities to meet the safe drinking water rules.

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Department of Human Resources
HEALTH DIVISION

1400 SW 5th AVENUE, PORTLAND, OREGON 97201

(503)

TDD-NONVOICE: (503) 229-5497

January 17, 1991

PRESENTATION OF TESTIMONY

TO: Representative Ron Wyden
 House Small Business Subcommittee - Field Hearing

FROM: Dave Leland, Manager, Drinking Water Program
 Brendan Doyle, Manager, Task Force on Drinking Water Construction Funding
 and Regionalization

FORUM ON FUTURE DRINKING WATER SUPPLIES IN OREGON

The Oregon Health Division, through its Drinking Water Program, has primary enforcement responsibility for the federal Safe Drinking Water Act in Oregon. The Division assumed this responsibility, or "primacy", in 1986. The Division operates a comprehensive drinking water program which currently meets all EPA program objectives contained in the State-EPA agreement, and also carries out a variety of state priority functions designed to improve drinking water quality, including on-site technical assistance, training, and operator certification. Oregon faces major new costs and challenges in efforts to maintain and improve drinking water quality in the future, and these fall into two categories: 1) developing financial capacity for funding improvements to water system facilities and operations, and 2) funding the state regulatory program activities to guide and direct these improvements.

The number of drinking water standards are increasing and public water systems are looking for ways to either invest in new water treatment technology or regionalize with other systems in trying to respond to these new requirements. Attachment 1 shows the increase from 1987 through 1995 in the number of contaminants that public water systems must test for. Oregon has historically been enforcing compliance with about 25 primary drinking water standards in public water systems. By 1995 there will be nearly 200 contaminants to test for. The number of and types of systems required to meet these new standards is also increasing.

Attachment 2 (Schedule of Anticipated Drinking Water Quality Improvements 1989-2000) is a more detailed overview of the new regulations that are coming into effect on a national level including Oregon. This chart shows that there are nine major rulemakings in the works at the federal level. The Health Division is currently on schedule in terms of adopting and implementing new federal drinking water standards. Water system managers are beginning to make studies and expend funds for major water system improvements. For example, the City of Milwaukie is now spending nearly two million dollars to construct treatment systems to remove trace levels of organic solvents from city wells. The Portland Water Bureau has submitted an interim compliance plan for meeting new surface

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water treatment regulations which will cost 2.5 to 4 million dollars. In addition, the Bureau has major studies underway to identify future water supply needs in the rapidly growing metropolitan region, determine water sources available to meet these needs, and to investigate water treatment methods to insure safe drinking water from these sources. The Corbett Water District in eastern Multnomah County will begin construction this summer on a \$600,000 slow sand filtration plant to meet new filtration requirements. During 1991, Division staff will be reviewing the performance of 55 community water systems in Oregon which use unfiltered surface water sources to determine which systems must either construct filtration plants or develop alternate sources of water. The cost to filter all these systems is \$18 million.

WATER SYSTEM CONSTRUCTION FUNDING

A state Task Force on Drinking Water Construction Funding and Regionalization focused during the past year on the financial impacts on public water systems resulting from implementing the Safe Drinking Water Act in Oregon. The task force recommendations are being drafted into a bill for the 1991 Legislative Assembly which is now in session. The Task Force recommended that the state create a drinking water fund using state bonds which would then be loaned to public drinking water systems or municipalities. The fund also includes a small grant component. The fund will be administered jointly by two existing state funding agencies and the Health Division drinking water staff.

The Task Force conducted a survey to identify capital improvements that Oregon's 983 community water systems are planning to make over the next 10 years, including those required by new regulations and improvements needed in existing infrastructure. The survey shows that there is about \$1.4 billion of total need for source development, storage, treatment, distribution, new growth and other projects. Of this amount \$1.2 billion is tied to non-growth needs and \$400 million to treatment or other water quality projects. The magnitude of the needs will not be precisely known until the new standards have been fully adopted and the required monitoring has been completed.

The Task Force then looked at how systems have financed these types of projects in the past and found that three federal and five state funding programs have provided loans, grants and loan guarantees, primarily to smaller-sized systems, especially those serving low and moderate income households. Other systems have traditionally raised their water rates and used municipal general obligation or revenue bonds to finance their improvements.

Attachment 3 and 4 show the projected needs figures. In 1994, as some of the Oregon systems that need to build filtration plants begin these projects, total needs could be \$186 million. Non-growth needs could be \$175 million. Of this amount, that at least half should be met by local effort and the mix of state and federal funds now available, which would leave about an \$80 million shortfall. In other years, the shortfall could vary between \$40 and \$80 million per year.

In addition to this funding mechanism, the Task Force investigated how drinking water suppliers can plan for the many changes that the future will bring. This includes working with county officials, county planners and the Department of Land Conservation and Development in adopting county-wide public facilities plans. At the individual system level, operators will be asked to include

capital improvements plans in the master plans they already submit to the Health Division. Via the Task Force final strategy document, drinking water systems will be presented with a complete menu of the choices that they have to manage for the future. The Task Force has examined the existing state statutes and feel that there is sufficient authority to enable drinking water suppliers to:

- 1) consolidate their operations with one another;
- 2) annex new supplies and service areas;
- 3) hire circuit riders to spread the costs of testing, operating and maintaining the water supply across several systems;
- 4) form investor-owned utilities, or
- 5) create new water supply districts

DRINKING WATER PROGRAM FUNDING

The Health Division Drinking Water Program operations are funded through a combination of state general funds (42%), fees (9%), federal preventive health block grants (11%), and the EPA primacy grant (38%). As federal drinking water regulation has increased, primacy funding has not kept pace. This will seriously limit Oregon's ability to implement and administer new regulations.

In addition, property tax limitation measures adopted in the last election are beginning to subject the state general fund portion of the budget to huge reductions over the next five years unless replacement revenues are put in place. In short, workload is increasing rapidly while program resources are in fact decreasing. The Association of State Drinking Water Administrators has estimated that state programs will require at least a 100% increase in overall funding to fully implement new regulations.

Oregon is characterized by a large number of very small public water systems. These systems experience multiple difficulties in complying with drinking water regulations. Because these systems are small, they frequently lack financial capacity for paying the costs of compliance, including basic monitoring as well as system improvements necessary to meet water quality standards. These systems are frequently operated on a part time basis, sometimes by volunteer staff. Operator expertise is limited. Small systems are usually very simple and lack treatment facilities to control water quality. Finally, drinking water regulations are designed primarily for operation of large water systems and frequently prove overly complex when applied to small systems.

As a result of these characteristics, small water systems require considerable on-site direct assistance with water quality and regulatory compliance problems. Operators of small systems have large needs for specifically targeted training programs. These training and technical assistance activities require significant program resources. However, increasing demands on the program for new rule administration activities in the absence of additional program resources will result in reductions in training and technical assistance which in turn will reduce the ability of small systems to comply with regulations.

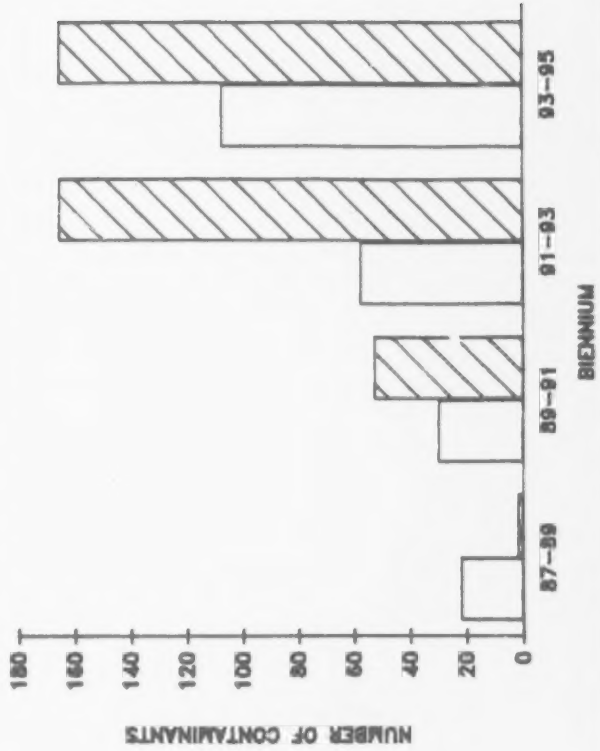
THE FEDERAL GOVERNMENT'S ROLE

The federal government can and should help in both areas of funding need. Consideration should be given to providing states with financial assistance for use in state water system construction funding programs. The EPA must commit adequate funds to state drinking water regulatory programs to assure their

ability to administer the new regulations. Finally, additional regulations that may be considered in the future should be carefully weighed against the ambitious regulatory agenda already scheduled and in place to assure public health protection without overwhelming both public water systems and state programs.

Attachment 1

DRINKING WATER PROGRAM TOTAL NUMBER OF CONTAMINANTS REGULATED BY BIENNIUM



☐ CONTAMINANTS WITH MAXIMUM CONTAMINANT LEVELS (MCLs)
☒ CONTAMINANTS WITH MONITORING REQUIREMENTS ONLY (NO MCLs)

Attachment 2

State of Oregon

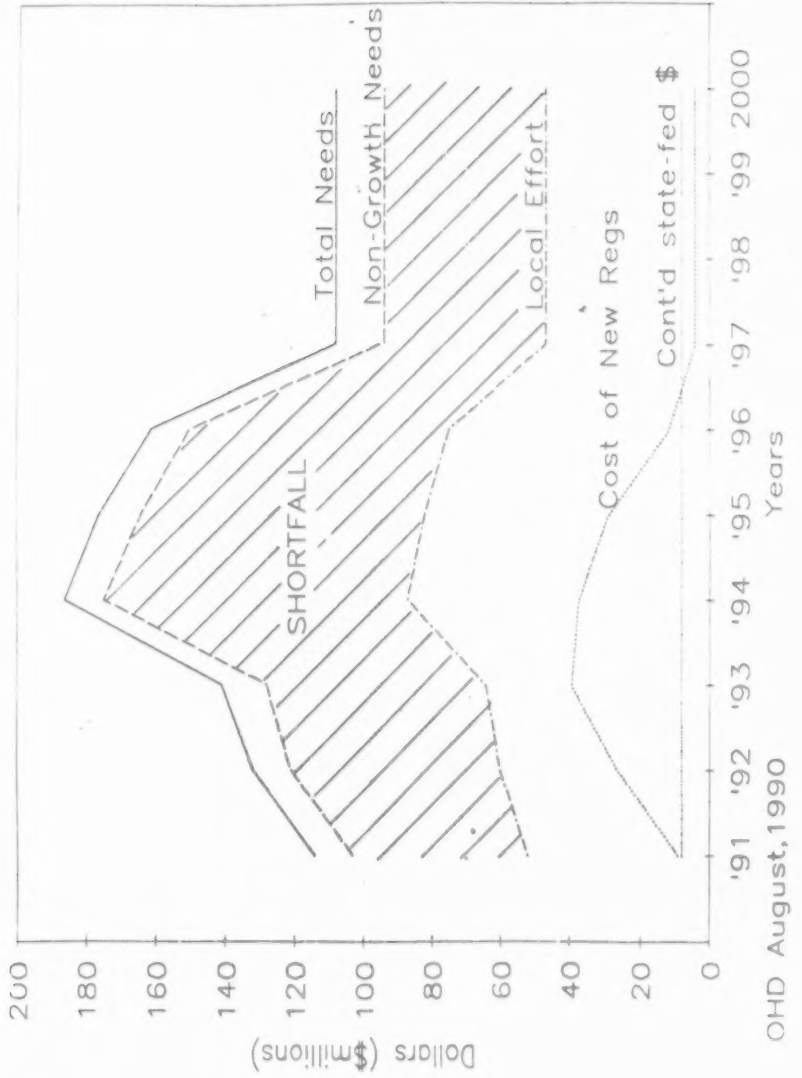
Schedule of Anticipated Drinking Water Quality Improvements (1989-2000)

Rulemaking	Activity	1989	1990	1991	1992	1993	1994	1995	1996	1997-2000
Volatile Organic Compounds in surface and groundwater sources (S & G)	All systems monitor & control VOCs (solvents, gasoline, THMs, EDB, DBCP, etc.)	12/87 ▼	1/89 V/C, C ₁	12/90 C ₁	12/91 C ₁					Improve water quality
Total Coliforms (S & G)	All systems monitor & control bacteria, monitor viruses, pathogens	6/89 ▼		1/91 V/C	monitor					Improve water quality
Surface Water Treatment (S)	All surface sources (1989-1993) and GW sources w/surface-influence (1994-2000); install filtration or exempt out	6/89 ▼		1/91 12/91 V tests C	6/93 C					Improve water quality
Groundwater Source Protection & Disinfection (G)	All GW systems disinfect; set up well-head protection					9/93 ▼		3/95 ▼	3/96 V/C	
Disinfectants/Disinfection by-products (S & G)	All systems balance risks and control tri-halomethanes, etc.				3/93 ▼		3/94 ▼	3/95 C		Improve water quality
SOCs and IOC (Ph II) (S & G)	All "vulnerable" systems monitor/control nitrate/nitrites, pesticides, selenium, etc.		12/90 ▼		6/92 V/C, C ₁	6/93 C ₁	6/94 C ₁			Improve water quality
SOCs and IOC (Ph V) (S & G)	All "vulnerable" systems monitor/control add'l contaminants				3/92 ▼	9/93 ▼	9/94 C ₁	9/95 C ₁	9/96 C ₁	
Radionuclides (S & G)	All systems monitor and control radon, etc.				6/92 ▼	6/93 V/C, C ₁	12/94 C ₁	12/95 C ₁		
Add'l Lead & Copper Corrosion Control (S & G)	All systems monitor Pb/Cu and maximize corrosion control		12/90 ▼		6/92 V/C, C ₁	9/93 C ₁	6/94 C ₁			

N.B. Many systems are already monitoring for and controlling the contaminants covered by these rulemakings

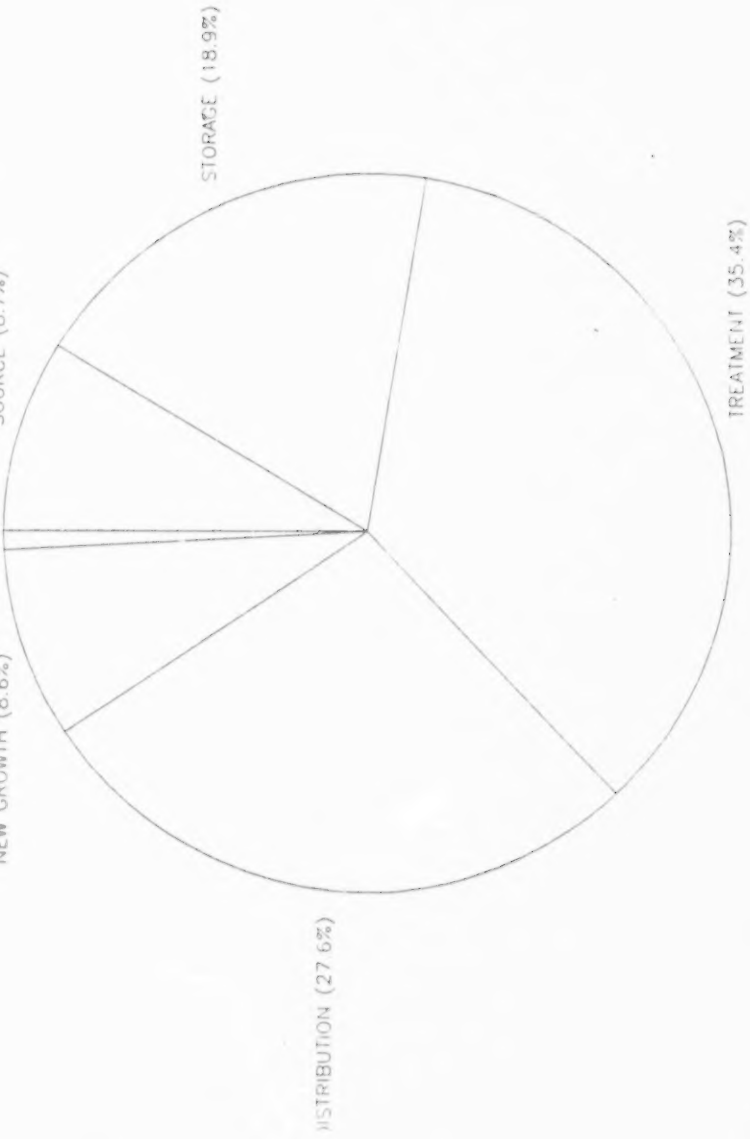
C = date when all regulated systems must monitor and start controlling problem contaminants
 C1 = date when all regulated systems serving >10,000 persons must monitor and start controlling problem contaminants
 C2 = date when all regulated systems serving 3,000-10,000 persons must monitor and start controlling problem contaminants
 C3 = date when all regulated systems serving 200-3,299 persons must monitor and start controlling problem contaminants
 C4 = date when all regulated systems serving 25-199 persons must monitor and start controlling problem contaminants
 ▼ = U.S. EPA finalizes rulemaking
 V = Oregon State Health Division adopts final state rule

Attachment 3 ESTIMATED FINDING SHORTFALL



Attachment A

TOTAL NEEDS TO YEAR 2000 - \$1.4B
OTHER (0.9%)
NEW GROWTH (8.6%)
SOURCE (8.7%)



Testimony of Gail L. Achterman
before the
U.S. House of Representatives
Small Business Committee
Forum on Future Drinking Water Supplies
February 11, 1991
Portland, Oregon

Thank you for inviting me to testify today. My name is Gail L. Achterman. I am a partner in the law firm of Stoel, Rives, Boley, Jones & Grey. I have worked on public water supply issues for many years as a lawyer in private practice, as a board member for a small water district, and as a public official. I served on the Oregon Water Resources Commission from 1981 to 1985. From 1987 to 1991 I was Governor Goldschmidt's Assistant for Natural Resources and chaired Oregon's Strategic Water Management Group.

I will address three issues in my testimony today: (1) costs of complying with the Safe Drinking Water Act; (2) availability of municipal water supply; and (3) interrelationships between Safe Drinking Water Act compliance and forest practices.

Costs. The Oregon State Health Division regulates 3,446 water systems in Oregon. Many of them are very small serving only a few households. Our Drinking Water Task Force estimates that it will cost \$1.4 billion to bring these systems into compliance with federal drinking water standards over the next 10 years. Much of the money to pay for these improvements can be raised locally, but the state estimates a shortfall in revenue-generating capability of \$40-60 million per year.

People demand clean safe drinking water, as they should. It is a basic factor in public health. Yet given the very high costs, careful risk assessment is needed. Are all the dollars that are going to be spent really going to result in public health benefits?

Consideration of some examples should demonstrate why risk assessment and greater flexibility are important. Some of the small systems in Oregon serve only recreational properties. Water is gathered from the surface in surrounding mountains. The Water is not consumed by residents daily year round, thus reducing exposure to any contaminants. No health problems have arisen. Other small rural systems serving the same number of users have had giardia problems. Should these systems be treated the same?

The underground storage tank program and its impacts on rural communities provides a good analogy. We do not want groundwater contamination from underground tanks, any more than we want poor drinking water. Yet application of uniform

national standards has resulted in closed gas stations throughout rural Oregon. The direct impacts on small businesses and citizens are severe with people driving miles to get gas.

When Oregon required water system operator certification a few years ago, many rural systems had a very hard time meeting the requirement in spite of state assistance and training programs. They are going to have an even harder time paying for Safe Drinking Water Act compliance. Frankly, some of the systems will simply not comply. What will be done then? Shut off people's water? What if there have never been health problems with the system?

No one questions the importance of safe drinking water. What does deserve to be questioned is the health benefit of imposing the uniform national requirements on all systems no matter what their size or history of health problems.

Availability. As systems are required to meet the new federal standards, inevitably they must review their water supplies. If a new treatment system is going to be built and financed, providers must make sure they have good water rights and sufficient supply to meet future needs. Through this process I fear many providers are going to discover they do not have adequate water rights.

When minimum stream flows (MSF) were set for Dairy Creek in Washington County, the City of Banks realized that the MSF could affect its rights. They checked and found out that they did not have any rights on the springs that supplied them. Special action had to be taken to assure the city water supply. The wild and scenic river planning work on the Salmon River has uncovered the same problem; many small systems do not have water rights.

Most Oregon streams are overappropriated today. Water is not available for these systems to appropriate. So when water providers start redesigning their systems to meet drinking water requirements, they are going to find that appropriating water from new sources is difficult. It is not there for the taking.

Forest Practices. Recently the state has received many complaints about the impact of logging practices on private, state and federal lands on water supply systems. In some cases lawsuits have been brought. Under Oregon law forest practice regulations are only aimed at providing treatable water, not drinkable water. Yet many of the small systems have no treatment at all and turbidity from logging does affect the quality of the drinking water. The public response often is that the forest practice rules need to be changed.

I urge caution on this point. Certainly logging practices must protect water quality, but with the federal safe drinking water requirements many of these systems are going to be required to install treatment works in any case. Forest practice reform should be done recognizing the reality of the Safe Drinking Water Act requirements so that the two sets of regulations fit together logically.

Needed Action. The greatest need right now is for a careful analysis of health risks associated with drinking water systems. Can the federal requirements be modified to allow more flexibility for small systems?

Obviously, the other need is the on-going one of federal dollars to pay for new federal regulatory requirements. Given our public revenue picture at all levels of government, I realize this is unlikely, but federal recognition of the enormity of the costs involved in program implementation is needed. Additional time for compliance may be required.

Oregon

DEPARTMENT OF
ENVIRONMENTAL
QUALITY

TESTIMONY GIVEN BY
GREG PETTIT
OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

HOUSE SMALL BUSINESS COMMITTEE FIELD HEARING
PORTLAND, OREGON

February 11, 1991

Thank you for the opportunity to talk to you today. For the record, I am Greg Pettit, Manager of Water Quality and Biological Monitoring, Laboratory Division, Oregon Department of Environmental Quality (DEQ). I have 13 years of experience with the Department on Water Quality issues. Formally I was the Groundwater Quality Coordinator for the Water Quality Division and oversaw the development of agency policy and rules for groundwater water protection. I was the principle agency staff person for the development of the Oregon Groundwater Quality Protection Act, a comprehensive groundwater quality protection bill enacted in 1989. I am currently a member of the National Governors Association Task Force on Agriculture and Water Quality.



The basic mission of our agency, with respect to water, is to protect water from contamination that would impair the beneficial use of the water, or threaten public health or the environment. Beneficial uses include public water supply, propagation of fish, wildlife and aquatic life, and for domestic, irrigation, industrial, recreational, and other uses of the water. Often, but not in all cases, the drinking water use is the most sensitive to contamination. We differ in our mission from the Health Division of the Department of Human Resources, in that we concentrate on the protection of the resource in its natural environment through the control of potential sources of contamination.

Clean, adequate water supplies are essential for public health, industry, agriculture, wildlife, recreation, and quality of life. The affects of contamination, both on public health and the environment are not always immediately evident. Groundwater contamination, for example, can persist for hundreds of years, and as a result affect not only our immediate use of the resource, but future generations as well.

I would like to mention three issues that I believe will need to be addressed in order for us to more effectively make progress in protecting our important water resources.

1. Implementation Resources - Both at the state and federal level, considerable environmental policy regulation has been developed without adequate regard for the cost and practicality of implementation. The effectiveness of any environmental policy or regulation is limited by its implementation. We need to consider, both with existing programs and new programs the costs (public and private) of the program, and ways of funding it or implementing it. For example the Wellhead Protection Program, which is contained in the Safe Drinking Water Act, is a program that has considerable merit, but is also costly to implement, and implementation has not been funded. We have seen a proliferation of initiatives at the federal level, both in legislation, and in EPA strategies that have ignored cost and funding.

We in Oregon are very proud of our record as a leader in environmental protection. However, our resources are limited and we have to be careful that for a given amount spent on environmental protection we get the maximum return. Efforts to protect water quality in Oregon are not limited by lack of statutory authorities or strategies, but are primarily limited by funding.

2. Coordination and Consistency - Many of our water quality protection activities stem from federal legislation. This

legislation includes RCRA, CERCLA, FIFRA, the Clean Water Act, the Safe Drinking Water Act, and the Farm Bill. There are many environmental policy issues that are shared by these programs, such as, the development of standards.

These activities need to be coordinated and consistent. Currently they are not. For example, acceptable risk levels represented by federal drinking water standards often are considerably higher than risk levels represented by aquatic toxicity criteria, or RCRA clean-up levels. As a result public water supply systems can serve water with contaminant concentrations at levels higher than acceptable clean-up levels for groundwater at contaminated sites. It is not my intention to imply that the Drinking Water Standards are inappropriate, but that it is difficult to explain this type of inconsistency to the public.

In addition to consistency between programs, we need consistency over time. The public, the regulated community, and the government agencies must have some stability in policies and standards. At the federal level, long term strategies for environmental protection would allow the states to more effectively implement programs.

3. Prevention - Currently there is a tremendous imbalance in the amount of resources that are being spent on correcting

problems resulting from past practices compared to preventative activities. This is particularly true in the area of groundwater.

We need to find ways of reducing the amount of pollutants that will eventually find their way into public waters. In order to accomplish this more should be done to support monitoring, inspections and enforcement, regional water planning, development of highest and best practicable methods, and perhaps most importantly - public education and technical assistance.

Although the value of prevention is seldom argued, its importance is often not reflected in program budgets. The amount of money that is being spent on clean-up activities continues to dwarf that which is directed towards more preventative programs.

Again, I thank you for the opportunity to talk to you today about this important issue. I would be happy to answer any questions you may have.



Department of Human Resources

HEALTH DIVISION

1400 SW 5th AVENUE, PORTLAND, OREGON 97201

(503) 229-6302

TDD-NONVOICE: (503) 229-5497

January 11, 1991

UNFILTERED SURFACE WATER SOURCES COMMUNITY DRINKING WATER SYSTEMS

Attached is a listing of Oregon Community Water Systems which will be examining the impacts of the state Surface Water Treatment Rule on their unfiltered surface water sources. Portland is not included in this list because the Portland Water Bureau has submitted its interim compliance plan which discusses how the Bureau plans to comply with the regulation. This is a preliminary list in that systems with "surface-influenced ground water sources" will also need to examine the effect of the rule on their systems. Only systems with unfiltered surface water sources are listed here.

If all of the systems listed here determined that they needed to install slow-sand filtration to meet the rule, the total estimated cost would be \$18-20 million over the next three years. The cost estimates were prepared using standardized engineering "cost curves" based on the volume of water used by the system. Actual costs will be estimated by systems after they have completed their studies to determine whether or not they need to construct a filtration plant.

For further information call the Oregon Health Division, Drinking Water Section, 229-6302.

attachment

AN EQUAL OPPORTUNITY EMPLOYER

Mailing Address: P.O. Box 231, Portland, OR 97207
Emergency Phone Voice (503) 229-5599 — TDD-Nonvoice (503) 252-7978



Safety on Tap

The Safe Drinking Water Funding Program:

A Strategy for Providing Safe, Dependable Drinking Water in the 1990s

Oregon is headed for a drinking water crisis during the 1990s because:

- New regulation mandates that many more contaminants in drinking water be controlled requiring new and expensive treatment;
- All of Oregon's 3,446 public water systems, large and small, are being affected;
- At present funding rates, a shortfall of \$40-80 million per year in construction funding is projected over the next 10 years!
- Household and business water bills will skyrocket in some areas without state assistance.

What is the problem?

Oregonians are being challenged to provide *safe* drinking water. Consumer awareness and concern is increasing as more are being notified that there are chemicals in their drinking water. All systems are being impacted by regulations to control more contaminants. As information on contamination comes in, the search and competition for *safe* source water is accelerating. The demands on watersheds and aquifers to support drinking water supplies and other uses is intensifying. The cost to most communities and water rate payers is well beyond their ability to pay without further financial assistance.

What is the cost?

Current system improvements and new regulation will cost drinking water ratepayers \$1.4 billion over the next 10 years. Sixty percent of this need will be paid for with rate increases, municipal bonds and existing programs. According to the Oregon Health Division there's still a \$40-80 million shortfall per year. Communities can and are willing to pay most of this cost, but Ballot Measure 5 is changing the playing field for financing community infrastructure and local/state partnership is needed.

How is it to be funded?

Legislation is proposed to create a state Safe Drinking Water Funding Program. The program would be used to supplement local effort and federal and state programs to meet the funding shortfall and future water supply needs. It would enhance the state Water Resources Department's and Economic Development Department's existing programs for financing drinking water projects. For example, in the '91-'93 biennium, an \$8.2 million contribution to the Safe Drinking Water Funding Program from state general funds, lottery proceeds or other sources would provide \$7.5 million in grants and would generate nearly \$41 million in loans. Based on financial needs for loans and grants, the Safe Drinking Water Funding Program could save communities 30-40% of the cost of financing a drinking water project with a local revenue bond. These savings mean that water rates won't increase as much as they would without state help. Grants would also help systems find coordinated solutions to their drinking water problems. Solutions could include regional initiatives and developing coordination agreements with cities, counties and other systems.

What are the benefits?

Safe drinking water for all citizens and a healthy economy are essential for Oregon. Large and small, urban and rural, rich and poor communities must continue to provide their citizens Safety on Tap.

The Safe Drinking Water Funding Program was developed by
the Task Force on Drinking Water Construction Funding and Regionalization
For further information call: 229-6302

TASK FORCE**Drinking Water Construction Funding and Regionalization**

Gene Seibel, American Water Works Association, Task Force chairman

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Steve Anderson, Consulting Engineers Council

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Bob Rindy, Department of Land Conservation and Development

Roelin Smith, Water Resources Department

Larry Sprecher, Metropolitan Service District

Peter Thurston, Oregon Rural Community Assistance Program

Burton Weast, Special Districts Association

Bob Willis, State Drinking Water Advisory Committee

Brendan Doyle, OHD, Task Force Manager

20 Questions and Answers

about the

Safe Drinking Water Funding Program

1. What programs does the state have now to help fund local drinking water projects?

The Water Development Loan Fund (WDLF), the Oregon Economic Development Department's (OEDD) Special Public Works Fund (SPWF) and Community Development Block Grants (CDBG), and the municipal State Energy Loan Program.

The Oregon WDLF, administered by the WRD makes loans and purchases municipal revenue bonds for drinking water projects. The WDLF also provides financing for irrigation, fish protection and watershed enhancement projects. As a self-supporting general obligation bond program, the WDLF charges an administrative fee and all transaction costs to the borrower. These additional costs to borrowers have made the WDLF less attractive than other programs. For these reasons, the WDLF has not funded many drinking water projects in the past. The bond cap for the WDLF has been set at \$50 million per biennium (for all projects, not just drinking water projects) and as such, it has substantial capacity to continue funding municipal drinking water projects, especially if borrowers' costs can be lowered.

The SPWF and state CDBGs (administered by OEDD) provide loans and grants to projects which primarily benefit low and moderate income persons and projects needed to support economic development. The SPWF utilizes state lottery proceeds and is just starting a revenue-bond-based funding program. State CDBGs are subject to appropriations from the U.S. Department of Housing and Urban Development. The federal funds available to drinking water systems are expected to remain at current levels. These two programs have provided the majority of state funding for municipal drinking

water projects in the past.

The Oregon Department of Energy makes loans to drinking water projects which incorporate energy saving technology (e.g., energy efficient pumps). Loans are repaid from energy savings.

These programs have limited capacity to meet the funding shortfall that is anticipated over the next 10 years. In fact, the \$40-80 million shortfall was estimated assuming that existing state and federal programs will continue to fund \$8 million annually in future years.

2. Why is the new program needed? Why aren't existing state infrastructure financing programs adequate?

The major existing sources of state financing for drinking water projects are the WDLF managed by the WRD and the SPWF program administered by the OEDD.

The WRD program offers GO bond financing which can be an attractive source for many communities, but there are two problems: 1) the program has no funds to use in subsidizing loans for low-income communities; and 2) under the state Constitution, the program can offer loans only to projects which serve fewer than 30,000 persons. The SPWF program can serve communities of all sizes and does have grant funds available but the program is designed to assist projects needed to support economic development—this means that some projects needed to meet Safe Drinking Water Act requirements will not qualify for SPWF funding.

The state CDBG program serves cities and counties outside the state's metropolitan areas. These metro areas each administer their own CDBG funds. OCDBG public works grants are limited to \$500,000 per project. This amount

is insufficient to fully fund most community-wide water projects. Federal funds for this program are limited and insufficient to meet the funding shortfall identified by the Oregon Health Division (OHD). In addition, grant selection criteria give priority to projects needed to solve the most serious public health problems (e.g., a boiled water notice is in effect) — safe drinking water projects do not always rank high enough in this area to qualify for OCDBG funding.

3. Why should the state provide additional assistance, even in view of the limitations of the existing funding sources?

Communities will not be able to avoid making improvements to their systems (since the OHD will enforce the drinking water regulations in part by putting communities on compliance schedules to build new treatment facilities). Investments in new treatment often compete with needs to fund ongoing system repairs and replacements. Without additional state support to assist local drinking water projects, many areas will need to increase water rates dramatically (400-500%) in order to fund needed improvements. This will create serious hardship in low-income areas. Some projects may not proceed without state assistance even though the project and system may be financially viable in the future.

The state already has a policy of assisting drinking water projects to support economic development. The proposed Safe Drinking Water Funding Program puts funding for health and safety related drinking water projects on an equal footing with economic development projects.

4. What level of state assistance is needed? How much money is being requested for '91-93?

A state contribution of \$8.2 million would make \$41 million in loans and \$7.5 million in grants available for drinking water projects. A state contribution of \$732,000 would make \$40.8 million in loans alone, available at terms that would be much more attractive to municipalities than state loans are now. Oregon has a policy of awarding grants to qualified applicants. About \$2.5 million/year in state funds has been used to make grants to drinking water projects in the past. The \$7.5 million being requested for grants would triple the level of state support and broaden the use of grants for technical assistance, facility construction and development, the coordination agreements called for under state public facilities planning requirements.

5. Who would administer the program, since the SPWF and WDLF programs are operated by separate agencies?

The Task Force recommends OEDD as the lead agency for the Safe Drinking Water Funding Program. OEDD would act as the single point of contact for entities seeking state help with funding local drinking water projects. OEDD staff would review applications, with the cooperation of WRD and the OHD. Funding package recommendations would be made by OEDD, although approval for the sale of WDLF bonds would remain the responsibility of the Water Resources Commission.

6. How would the Safe Drinking Water Funding Program work?

In starting up the Safe Drinking Water Funding Program, the OEDD, WRD, OHD and DLCD would convene a work group to develop the administrative rules and inter-agency agreements that would be necessary to obtain full and complete inter-agency cooperation. OEDD and WRD would each issue bonds as they are currently authorized. However, the proceeds of their bonds would be made available as loans for projects that meet the Safe Drinking Water Funding Program's guidelines and criteria. With the addition of grant funds, the Safe Drinking Water Funding Program's capacity to finance drinking water projects would substantially improve the capacity of existing programs to fund safe drinking water projects. The OEDD would serve as a single point of contact for loan and grant applicants and potentially provide other services related to Program operations. Both OEDD and WRD need to explore the effects of using a *melded rate* bond and loan program on their current operations before implementing this approach.

7. What is the melded rate bond and loan concept and how is it different from what is being done now with existing State financial assistance?

The concept is essentially that:

- The State would issue both SPWF revenue bonds and WDLF GO bonds to provide funding for drinking water projects.

- The local loans would be made on a revenue basis with security less than the capital markets would require for comparable revenue bond issues.

- The interest rate on the loans to municipal and community borrowers would be the melded rate on the bonds, that is, the lower GO rate combined with the higher revenue bond rate.

- The loan repayments would be pooled and pledged first to repayment of the revenue bonds (to obtain two times coverage) then to the GO bonds.

- Half of the program would count toward the state GO debt load. The remainder would be separately handled as revenue debt unique to this purpose.

A portion of the GO debt would be self-supporting (the portion is determined by the amount of state support to be provided, if any). All the revenue bonds are, by their nature, self-supporting.

This concept is different in that:

- All current state financing programs use GO bonds only, except for the SPWF which is in the process of issuing its first revenue bond. No state assistance program issues both GO and revenue bonds.

- Most local loans require extensive security, sometimes including the general obligation pledge of the issuer. The security requirements often exceed those required by the capital markets for comparable GO bond issues.

The only revenue bond issue, the SPWF issue, has found it necessary to provide two times coverage, meaning that the loan repayments must be twice the debt service requirements. This is possible due to the number of performing loans that were funded from lottery proceeds. This high coverage requirement was incurred to obtain bond insurance. For the proposed Safe Drinking Water Funding Program, we assume the same two times coverage.

- The interest rate on loans made from WDLF GO bonds equals the rate on the same type bonds plus an administrative charge.

- For the state's GO funded programs, the entire funding program counts toward the state's GO debt load.

Most of the debt carried by the Safe Drinking Water Funding Program would be self-supporting. For instance, the Department of Environmental Quality's GO bonds are 70% self-supporting and 30% General Fund supported. The Safe Drinking Water Funding Program could be structured such that only 10% would be state supported and 90% would be self-supporting. All Vets bonds are self-supporting.

8. How does Ballot Measure 5 affect municipalities' ability to finance drinking water facilities?

As it is currently interpreted (and without new legislation to clarify certain parts of Ballot Measure 5), Ballot Measure 5 may affect municipalities' financing of drinking

water facilities. Two impacts are possible:

- 1) on the structure of fees and charges, and
- 2) on the acquisition of land and equipment.

Under Ballot Measure 5, user fees and system development charges imposed by municipalities for drinking water may be within the \$10/\$1,000 of assessed value per

year tax limitation if the fees and charges are imposed on property or on the ownership of property, rather than on the usage of water. Most municipalities have a mix of usage-based fees, and property- or ownership-based charges. Municipalities may have to change their basis for determining fees and charges, which can be accomplished reasonably quickly.

Unfiltered Surface Sources
Community Water System

Name	Population served				
Region 1					
CLACKAMAS CO.		POLK CO.		Reedsport, City of	6000
PGE- Three Lynx	75	Falls City	804		
Rhododendron Summer Homes	825	Rock Creek Hideout	200	LANE CO.	
USFS Ripplebrook RS/ Timberlake JCC	450			Heceta Beach WD	3000
CLATSOP CO.		TILLAMOOK CO.		Alderwood Water Development Co.	35
Knappa Water Association	1200	Kilchis WD	420	Lakeshore Trailer Court	40
Youngs River- Lewis & Clark WD	2000	Manzanita**	2000	Cedar Water Association	50
Wickiup WD (backup supply)	1400	Mehalem	1400		
Cannon Beach	3000	Pacific City WD	800	LINN CO.	
Seaside WD	5000	Tierra Del Mar WC	300	Idanha	370
Warrenton WS	8000	Long Prairie WD	900	Lyons-Mehama WD	1670
Westport WA	500	Tillamook WC	5000		
Elderberry- Nehalem (emergency)	80	Wheeler WS	345	MARION CO.	
Evergreen Acres	70			Detroit	600
		WASHINGTON CO.			
		Banks	1000		
				Region 3	
HOOD RIVER CO.		YAMHILL CO.		BAKER CO.	
Cascade Locks	1000	Lafayette	1340	Baker	9510
LINCOLN CO.				WALLOWA CO.	
Bear Creek Hideout	125	Region 2		Joseph	1142
Panther Creek WD	600	COOS CO.			
Boulder Creek WD	180	Glasgow Co-op WA	58		
S.W. Lincoln Co. WD	2100	Powers	732		
Tachats	600	Coquille Care Center	50		
Kernville-Gleneden-Linc.Beach**	2500				
		DESNUTES CO.			
MULTNOMAH CO.		Bend**	18270		
Corbett	2300	Sisters**	820		
		DOUGLAS CO.			
		Galice Subdivision WC	57		

** indicates that filtration cost estimate based on actual field survey (1990)

The second impact concerns the use of bond proceeds from voter-approved, municipal general obligation bonds to acquire land and equipment for drinking water facilities. Ballot Measure 5 has been interpreted by some to subject the debt service on general obligation bonds issued to acquire land and equipment to the limits of Ballot Measure 5. A significant portion of most major investments in drinking water facilities include the acquisition of land and equipment (e.g., treatment technology, motors, pumps). The Municipal Debt Advisory Commission of the State will likely propose new legislation in the 1991 Legislative Session to rectify this potential problem. Its report will be released in January 1991. If new legislation does not correct this problem, absent a court decision, the debt service on general obligation bonds utilized to acquire land and equipment would be subject to the limits of Ballot Measure 5. Municipalities could use revenue bonds but at a higher cost than general obligation bonds and some municipalities may find revenue bonds prohibitively expensive.

Under the proposed Safe Drinking Water Funding Program, repayments on loans made from state general obligation bond proceeds issued under the authority of Article XI-1(1) of the Oregon Constitution would not be subject to Ballot Measure 5 limitations.

9. Does Ballot Measure 5 limit the state's ability to use either the Water Development Loan Fund or the Special Public Works Fund to finance drinking water projects?

As currently interpreted, the Ballot Measure does not apply to these two state financing programs. However, Ballot Measure 5 may affect the ability of municipalities

to repay loans made from these programs if the source of their loan payments is subject to the limitations of Ballot Measure 5.

10. Is there any benefit from a state program that only makes loans and does not offer grants?

Yes, state-issued bonds save local government funds and bond capacity. Clearly, the more money the state provides, the greater the benefit to improving drinking water. Other than direct grants which save all the interest and borrowing costs of bonds and loans, assistance is most effective in the following areas:

- Offering a lower interest rate through a melded interest rate;
- Pooling loans to provide a larger repayment pool and to diversify financial risk;
- Eliminating the interest, borrowing and coverage costs for the debt reserve amount;
- Possibly reducing the cost of the reserve by purchasing a surety from a bond insurance company (which is possible due to the superior credit structure of the state revenue bonds);
- Reducing the water rate impact of coverage, higher interest rates and higher sales costs by having lower loan repayment requirements than the bond market would require of separate municipal issues for example:
 - coverage of 1.1 times rather than 1.3 to 1.5 times;
 - reserve funding from a portion of the coverage over time;
 - pooled sales costs spread over a number of local governments.
- Possibly simplifying and reducing the cost of application and regulatory requirements.

11. Why would the state issue revenue bonds, rather than all GO?

Every GO bond issued by the state counts toward the state's GO debt load. As the amount of GO debt increases, the rating on all state GO debt could be affected. Therefore, issuing a portion as revenue bonds lessens the impact of this local government assistance program upon the states' own debt needs.

The Oregon Constitution limits the availability of WDLF GO bond proceeds to projects serving fewer than 30,000 population; therefore, the program needs to use revenue bonds too.

12. Won't the issuance of more debt affect the state's rating?

This is determined by the total amount of GO debt compared to the assessed valuation of the state and its population. Debt which is not self-supporting has a more negative impact than that which is self-supporting. To the extent that any help is to be provided through debt issuance, the total amount of debt is impacted. The combined revenue/GO approach lessens this impact for a total given assistance amount. For instance, if the State decides to support local projects by \$40 million, a total GO program would impact the debt load by the full \$40 million. The combined revenue/GO bond approach would impact it by only \$20 million.

The revenue debt will have its own rating independent of the GO rating and other state revenue debt. This does not mean that any defaulting revenue bonds would have no impact upon the state's credit rating but that the debt loads are not affected.

13. What is the level of risk to the state GO bonds?

No different from that for current GO bonds, if the loan repayment terms are the same. The risk derives from the terms of repayment, not from the pledging of the repayments. Therefore, the focus should be on the repayment terms: If they would be satisfactory for a program funded entirely from GO bonds, then they would be equally satisfactory for a program funded in part from GO bonds with a *subordinate claim* upon the revenues. A shortfall in repayment revenues would require the same amount of state support in either case. Oregon drinking water projects have a very good credit history. The Safe Drinking Water Funding Program guidelines would require that only financially viable projects would be eligible for state support.

14. How does the combining of the revenue and GO bonds assist the local governments, other than through the melded interest rate?

The combined repayments provide the necessary coverage for the revenue bonds without requiring the local governments to raise their water rates as much.

For example: assume that the annual debt service for the bonds is:

Revenue bond debt service	\$100,000
GO bond debt service	\$100,000

If the projects were split and matched to separate bond issuance:

	Local revenues must be
REV State requires 2x coverage	\$200,000
GO State requires 1 x coverage	110,000
Total	\$310,000

If the projects are pooled and the interest rate on the revenue / GO bonds are melded:

	Local revenues must be
REV State requires 1 x coverage	\$110,000
GO State requires 1 x coverage	110,000
Total	\$220,000

Net saving by melding interest rates rather than splitting loans: \$90,000

Note: Given the high security of the revenue bonds, this program assumes that the local loan coverage requirement is the same for a fully GO funded program as for the melded program.

15. Is the melded rate concept legal?

A preliminary review with bond counsel indicates that this is a legal approach. The departments involved in creating the program would set rules or develop guidelines with their bond counsel and financial advisors.

16. Does this attach the state's GO pledge to the revenue bonds?

No, according to bond counsel, the revenue bonds are secured by the loan repayments; if they are insufficient, then the state's GO may not be tapped. If the revenue bonds are half the program, then it would take more than half the loans not paying any contribution to their debt service to reach the point that the revenue bonds would dip into the debt reserve.

17. How can the credit impact and risk of GO bonds which are not fully self-supporting be lessened?

The program could be administered whereby the maximum state contribution does not exceed a fixed percentage of program costs, for example, 10%. Like the former DEQ bond bank program, the state could commit to support up to 10% of the annual debt service and the borrowers would support 90% (DEQ's program was 30%, state; 70%, borrowers). We recommend that only a portion of that 10% actually be used and the remainder

remain allocated and available in case it is needed by delinquent loans. As long as the program stays within the 10% limit, there should be no concern if the program utilizes some of the funding for delinquent loans, helping them to restructure and defer payments.

If the program is designed in this manner, the credit impact should be less than if the state commits to a partially self-supporting program. The DEQ bonds counted only 30% toward the *net debt* load of the state, leaving 70% self-supporting. With the 10-90% split, only 10% would be counted toward Net Debt.

As with the DEQ GO bonds, it is recommended that the bonds carry the full general obligation pledge of the state and the 10% limitation apply to the management of the program. Otherwise, the bonds may be treated as limited GO bonds and carry a higher interest rate.

18. What is the impact on local borrowing for other purposes?

Since these are revenue-based loans, there should be no impact on other programs which do not normally access drinking water revenues.

It is very important that the program not require a *first lien* which excludes other *parity* debt. If a first lien were required without the option for *parity* debt, then any other financing for water purposes undertaken by the local government would become much more expensive (it would be considered *junior lien* debt).

19. What is the savings to the local government annually?

For a \$5,500,000 loan, the local government would save 30% each year for 20 years (\$241,500 each year) with only loan enhancements

(s. e pays its own bond sale costs and reserve). The local government would save 40% (\$328,400) if 15% of the loan amount was provided in a grant.

Table A-1 shows the details.

20. Where can I get more information on the Safe Drinking Water Funding Program?

Call the Drinking Water Task Force at 503 / 229-6302 or write, Safety on Tap, P.O. Box 231, Drinking Water Section, Portland, OR 97207.

**Table A-1: Proposed Safe Drinking Water Funding Program
Comparison of State Assisted Loans versus Local Revenue Bonds**

	Municipality or system finances its project without any state assistance using a local revenue bond	Safe Drinking Water Funding Program with matched rate bonds and loan enhancements	Difference from cost of local revenue bond	Safe Drinking Water Funding Program with matched rate bonds, loan enhancements and a grant	Difference from cost of local revenue bond
Basic assumptions:					
Interest rates (excludes underwriter's discount)					
State GO bond rate	7.00%				
State revenue bond rate (this program 2x coverage)	7.30%				
Molded state GO and revenue rate	7.15%				
Local GO rate	7.00%				
Local revenue bond rate	7.65%				
Drinking water project size	\$10,000,000				
Portion funded locally	\$4,500,000				
Portion for state assistance	\$5,500,000				
Financing requirements:					
Issue size	\$6,350,000	\$5,500,000	\$850,000	\$4,675,000	\$1,675,000
Interest rate	7.65%	7.15%	0.50%	7.15%	0.50%
All-in interest rate (AIC)	8.73%	7.15%	1.58%	7.15%	1.58%
Coverage	1.30	1.10	0.20	1.10	0.20
Bond sale costs	\$220,000	0	\$220,000	0	\$220,000
Reserve size	Average Annual Debt Service	None		None	
Average annual debt service	\$630,000	\$525,000	\$105,000	\$446,000	\$184,000
Plus coverage	\$819,000	\$577,500	\$241,500	\$490,600	\$328,400
Savings each year for 20 years			\$241,500		\$328,400
Coverage paid to state yearly		\$26,250		\$22,300	

NOTE

PROTECTING OREGON'S SCENIC
WATERWAYS: *DIACK v. CITY OF PORTLAND*

BY

NANCY B. MURRAY*

Oregon's Scenic Waterways Act protects over 2000 river miles from injurious diversions. Prior to Diack v. City of Portland, only diversions in the designated section of a river were prohibited. In Diack, the Oregon Supreme Court broadly interpreted the Scenic Waterways Act to prohibit upstream diversions that would adversely affect the designated portion of the scenic waterway. This Note discusses the Diack decision in the context of state and federal water protection acts and concludes that Diack offers a sensible approach to protecting scenic rivers.

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I. INTRODUCTION

Oregon has more protected free-flowing rivers within its borders than any other state in the continental United States.¹ Together, Oregon's Scenic Waterways Act (Act)² and the National Wild and Scenic Rivers Act³ protect roughly 2000 river miles in

* J.D. 1990, Northwestern School of Law of Lewis and Clark College; B.A. 1979, Wellesley College. The author wishes to thank Professor Anne W. Squier for her comments and suggestions and the many people named in the footnotes for their contributions.

1. Telephone interview with John E. Lilly, Assistant Adm'r, Oregon Parks and Recreation Dep't (Nov. 17, 1989). Oregon is second only to Alaska in the number of river miles protected and exceeds the number of river segments protected in any other state, including Alaska. Telephone interview with Mike Salagiver, Field Rep. for U.S. Sen., Mark Hatfield (Ore.) (Jan. 23, 1990).

2. OR REV. STAT. §§ 390.805-.925 (1989).

3. 16 U.S.C. §§ 1271-1287 (1988).

Oregon. Most of the state's scenic waterways were designated by voter initiative in 1970 and 1988.⁴ The majority of federally protected river miles was granted protected status in the federal Omnibus Oregon Wild and Scenic Rivers Act of 1988.⁵ Thus, Oregon voters have shown strong support for protecting free-flowing rivers and their commitment to such protection is unique.

In *Diack v. City of Portland*,⁶ the Oregon Supreme Court held that the Act prohibits upstream uses that would adversely affect the free-flowing qualities of scenic waterways. After applying rules of statutory construction and examining legislative history, the court found that the legislature could have reasonably intended to give scenic waterways more protection than nonscenic waterways. By this holding, the court granted scenic waterways extraterritorial protection, a measure of protection few federal or state laws provide natural resources.

In response to *Diack*, the Oregon Water Resources Commission (Commission) imposed a freeze on issuing permits for new water uses above scenic waterways, pending its determination of the flows necessary to maintain the free-flowing qualities of scenic waterways.⁷ Some applicants may have to wait until the studies are completed in 1992 before the Commission can review their applications. In addition, the application fee for a water use permit can be as high as \$2000,⁸ causing considerable concern to all involved.

This Note discusses *Diack* and its ramifications. Section II briefly discusses the Sandy River Scenic Waterway and the facts

4. The 1970 voter initiative passed by a margin of 65% to 35% and designated about 496 river miles as scenic waterways. An additional 117 miles were protected by subsequent legislation and another 13 by proclamation of the Governor. Reynolds, *Protecting Oregon's Free-Flowing Water*, 19 ENVTL. L. 841, 850-53 (1989). The 1988 voter initiative added an additional 496.7 miles. Oregonian, Oct. 12, 1988, at B6, col. 2. The latter initiative passed by 54% to 46%. Oregonian, Nov. 9, 1988, at A1, col. 7.

5. Pub. L. No. 100-557, 102 Stat. 2782 (codified at 16 U.S.C. §§ 1274, 1276 (1988)). The 1988 federal legislation designated 1429 river miles as wild, scenic, or recreational, bringing the total to 1936 federally protected river miles. Oregonian, Oct. 13, 1988, at A1, col. 1.

6. 306 Or. 287, 759 P.2d 1070 (1988).

7. *Diack Decision Hits Home. Water-Right Applicants May Be In For Long Wait*, OREGON INSIDER, Aug. 15, 1989, at 1-2 [hereinafter *Diack Hits Home*].

8. *Id.*

and issues addressed in *Diack*. Section III analyzes the court's decision in light of both the rules of statutory construction and the legislative intent behind the enactment of the Scenic Waterways Act and its 1973 amendments. Section IV discusses the decision's impact on the water use permitting process and both the Commission's and the legislature's responses to the decision. Section IV also touches upon other ramifications of the decision, including its impact on water quality issues. Section V briefly discusses the nature of the *Diack* decision and the Scenic Waterways Act, and compares *Diack* to a United States Supreme Court case denying extraterritorial application of a provision of the Federal Power Act. In addition, Section V compares the Oregon Scenic Waterways Act to the National Wild and Scenic Rivers Act of 1968 and concludes that the federal act differs from the state act in structure and language, but probably also protects water flows through reserved water rights. However, the amounts and priorities of these reserved rights are uncertain. Section VI emphasizes the need for comprehensive planning of Oregon's water resources and concludes that *Diack* offers a sensible approach to protecting free-flowing rivers.

II. FACTS AND ISSUES RAISED

A. The Sandy River Scenic Waterway

The Scenic Waterways Act⁹ was enacted by voter initiative on November 3, 1970. Oregon voters found that the "outstanding scenic, fish, wildlife, geological, botanical, historic, archeologic [sic], and outdoor recreation values" of selected free-flowing waters provide present and future public benefits, and that the state's policy of allowing water impoundment "needs to be complemented by a policy that would preserve" such waters in their free-flowing state.¹⁰ The Act declares that the "highest and best uses of the waters within scenic waterways are recreation, fish and wildlife uses. The free-flowing character of these waters shall be maintained in quantities necessary for recreation, fish and wildlife uses."¹¹ The Act prohibits placer mining and the construction

9. 1971 Or. Laws 1 (codified as amended at OR REV. STAT. §§ 390.805-.925 (1989)). For a historical analysis and critique of the Scenic Waterways Act, see generally Reynolds, *supra* note 4.

10. OR REV. STAT. § 390.815 (1989).

11. *Id.* § 390.835(1). As originally enacted, the clause declaring the highest

of impoundment facilities within scenic waterways, and restricts water diversions. The Act directs the Water Resources Commission¹² to "carry out its responsibilities . . . [as the state's water resources administrator] with respect to the waters within scenic waterways in conformity with the provisions of" the Act.¹³

The Oregon Department of Parks and Recreation (Parks Department)¹⁴ is charged with managing the scenic waterway system "in such manner as to protect and enhance the values which caused such scenic waterway to be included in the system. In such administration primary emphasis shall be given to protecting the aesthetic, scenic, fish and wildlife, scientific and recreation features" of each area.¹⁵ The Act restricts development within one-quarter mile of the banks of protected river segments, pending the Parks Department's review and approval of proposed changes.¹⁶ The Parks Department may acquire land and interests in land, such as scenic easements, or it may condemn adjacent land to protect scenic waterways.¹⁷ In addition, other state agencies having responsibility over "boating, fishing, hunting, water pollution, health or fire control . . . [and are required to] endeavor to perform their responsibilities in a manner consistent with the

and best uses was preceded by the clause, "Subject to subsection (12) of ORS 536.310." 1971 Or. Laws 1, § 4. This clause was deleted in 1973, for unclear reasons, and its deletion has been the subject of much debate. 1973 Or. Laws 756, § 1. See *infra* notes 91-101 and accompanying text (subsection III(B)(2)).

12. Some history of the Water Resources Commission is helpful. When the Act was passed, the State Water Resources Board, established in 1955, was charged with setting state water policy, and the State Engineer was responsible for issuing individual permits. 1955 Or. Laws 707. In 1975, both the Water Resources Board and the State Engineer's office were replaced, respectively, by the Water Policy Review Board and the Water Resources Director. 1975 Or. Laws 581, §§ 1-2. In 1985, the Water Policy Review Board and the Water Resources Director were centralized in the newly created Water Resources Commission and the Water Resources Department. 1985 Or. Laws 673.

13. Or. Rev. Stat. § 390.835(4).

14. The Scenic Waterway Act originally gave the State Highway commission the responsibility of managing the Scenic Waterway System. 1971 Or. Laws 1, § 5. The State Parks and Recreation Division within the State Department of Transportation managed the scenic waterways until 1989, when a separate State Parks and Recreation Department was formed. 1989 Or. Laws 904, § 3. It continues to manage the scenic waterways.

15. Or. Rev. Stat. § 390.845(1) (1989).

16. *Id.* § 390.845.

17. *Id.* § 390.845(4)(b)-(c).

purposes of [the] Act."¹⁸

The Act requires the Parks Department to study potential scenic waterways and identify additional rivers that may be added to the system. With the Water Resources Commission's concurrence, the Parks Department may recommend such additions to the Governor.¹⁹ The Governor may then proclaim the river a scenic waterway, and if the legislature does not veto that action, the river segment becomes part of the scenic waterway system.²⁰

Pursuant to the Act, the State Highway Division studied a stretch of the Sandy River from Dodge Park in Clackamas County to Dabney State Park in Multnomah County. In its report to Governor Tom McCall, the Parks Department noted the Sandy River's pristine qualities and its popularity with hikers, campers, and anglers.²¹ The Parks Department found that the river provided habitat for osprey and bald eagles, coho and chinook salmon, winter steelhead, cutthroat and rainbow trout, Pacific giant salamanders, and other wildlife.²² Landowners adjacent to the river included the Camp Fire Girls, the YMCA, the Nature Conservancy, public utility rights of way, state and local public parks,

18. *Id.* § 390.905.

19. *Id.* § 390.855.

20. *Id.* § 390.865.

21. According to the report:

The Sandy River Gorge is a paradox: 35 minutes from downtown Portland and within an hour's drive of a million people, man's hand has yet touched it only lightly in passing.

. . . In a raft, one feels the shape of the water. Birds and deer and beaver are scarcely more alarmed by a quiet raft than by each other; its motion is natural and orderly in the manner of drifting things. One sees wild creatures as he might not by any other means. The intimate banks and the whole sweep of the gorge are viewed in perspective.

A downstream trip from Dodge Park begins suddenly. In 2.5 miles the river falls 80 feet through a series of pools and rapids not without an element of risk. Drownings [sic] occur here when inexperienced boaters attempt it without adequate equipment.

PARKS AND RECREATION SECTION, OREGON STATE HIGHWAY DIV., SCENIC WATERWAY STUDY: SANDY RIVER PRELIMINARY REPORT 16-17 (1972) [hereinafter SCENIC WATERWAY STUDY].

22. *Id.* at 36-37. The river boasts the best winter steelhead fishing of any river in the state. Telephone interview with Charlie Ciecko, Superintendent of Parks, Multnomah County (Sept. 10, 1990).

and private landowners.³³ On March 15, 1973, in letters to the Oregon State Highway Commission and the State Water Resources Board, Governor Tom McCall proclaimed the 12.5-mile segment of the river a scenic waterway.³⁴

B. The City of Portland's Proposed Hydroelectric Project

Since 1894, the City of Portland has used water from the Bull Run River, located about twenty-five miles east of Portland, for its municipal water supply.³⁵ The City collects and stores the water at two reservoirs along the Bull Run River. The water flows from the reservoirs downhill through three conduits to storage facilities on Powell Butte east of Portland. The water is then distributed to the City.³⁶

In 1975, the City began to seek an alternative municipal water source to supplement Bull Run waters during peak use periods and to serve as a backup supply in the event the conduits or other facilities carrying water to the City were damaged.³⁷ Consequently, the City constructed a complex of twenty groundwater wells along the south bank of the Columbia River, between the Portland International Airport and Blue Lake Park.³⁸ A booster

23. SCENIC WATERWAY STUDY, *supra* note 21, at 24.

24. Letter from Governor Tom McCall to Glenn L. Jackson, Chairman, Oregon State Highway Commission (Mar. 15, 1973); letter from Governor Tom McCall to W. Bruce Chase, Chairman of the State Water Resources Board (Mar. 15, 1973). Pursuant to ORS § 390.865, the designation became effective "the day following the adjournment sine die" of the 57th Legislative Assembly, which was July 6, 1973. The Sandy River segment is the only scenic waterway so designated upon recommendation of the Oregon State Highway Commission and subsequent proclamation of the Governor; the remainder have been added by legislative action or voter initiative. See Reynolds, *supra* note 4, at 855-57; see generally *supra* note 4 and accompanying text.

25. Oregon Water Resources Commission, *In re Referral of Permit Application 63,266 for the Use of Water from the Bull Run River for the Development of Hydroelectric Power* 2 (Apr. 11, 1986) (Project Background, Findings of Fact, Conclusions and Amended Order) [hereinafter Project Order].

26. *Id.* The three conduits can carry up to 225 million gallons per day, or about 350 cubic feet per second. The City normally requires one-half of this amount. *Id.*

27. *Id.* at 3. The facilities are currently in good working order. The City planned to avoid interruptions and harm caused by physical damage or poor water quality, and to meet peak demand. Telephone interview, K. C. Short, Director of Finance and Admin., Portland Water Bureau (Jan. 31, 1990).

28. Project Order, *supra* note 25, at 3.

station pumps the groundwater from these wells to the City's waterworks distribution points on Powell Butte.³⁹

When planning the booster pump station, the City discovered that for an additional \$1.6 million it could install pump-turbines in the pump station that would generate electricity when operated in reverse.⁴⁰ From October through April, when water from the reservoirs generally is sufficient to meet late fall and winter municipal water demands, the City planned to transport water from the Bull Run River to the Powell Butte facilities. The water would flow downhill from Powell Butte and through the turbines of the pump station to generate power. The water would then be discharged into the Columbia River, bypassing the Sandy River and its scenic waterway.⁴¹ This proposal would have reduced flows in the Sandy River downstream from the Bull Run River by up to 170 cubic feet per second (cfs) from January through April.⁴²

The City planned to sell the power to Portland General Electric Company, which would be forced to pay the City its so-called

29. *Id.* The City originally planned to produce 100 million gallons of water per day with the system. However, because of trichloroethylene (TCE) groundwater pollution in the area, the EPA requested that the City pump only 10 million gallons per day, just 10% of the originally projected amount. Telephone interview with Bruce Nias, Deputy Director, Water Quality and Envtl. Pol'y Div., Portland City Water Bureau (Sept. 10 and Sept. 19, 1990).

30. Respondent City of Portland's Brief and Abstract of Record at 4-5, *Diack v. City of Portland*, 85 Or. App. 255, 736 P.2d 196 (1987) (No. A37,696), *rev'd*, 306 Or. 287, 759 P.2d 1070 (1988) [hereinafter Respondent's Brief]. This amount subsequently increased to \$1.8 million as a result of fish studies the City undertook for the project. *Id.* at 5.

31. Project Order, *supra* note 25, at 3. The water discharged into the Columbia River would be toxic to fish because of its chlorine content. The City had obtained a National Pollutant Discharge Elimination System permit from the Oregon Department of Environmental Quality in order to discharge the water. *Id.* at 4.

32. Project Order, *supra* note 25, at 4. One hundred seventy cfs amounts to 110 million gallons of water per day, which is equal to the Tualatin River's daily flow in summer months. Petitioner Multnomah County's Petition for Review at 9, *Diack v. City of Portland*, 85 Or. App. 255, 736 P.2d 196 (1987) (No. A37,696), *rev'd*, 306 Or. 287, 759 P.2d 1070 (1988). It is also equal to the Wilson River's daily flow in summer months. Interview with Bob Potter (Feb. 1, 1990) [hereinafter Potter Interview]. Mr. Potter served as the first administrator of the State Scenic Waterways System for 7½ years. He was also involved in generating local support for intervenors in the administrative hearings and for subsequent plaintiffs in the *Diack* litigation.

avoided cost.³³ The City anticipated generating an average of twenty to twenty-three million kilowatt hours per year³⁴ and projected that the net profit on its initial \$1.6 million investment would be approximately \$216,000 in the first year.³⁵ These revenues were to go into the City's water fund for "debt service, operation and maintenance costs of the Water Bureau and stabilization of municipal water rates."³⁶

On February 16, 1982, the City applied to the Water Resources Department (Department) for a permit to use Bull Run River water to produce hydroelectricity.³⁷ On August 5, 1982, pursuant to Oregon Revised Statutes (ORS) section 537.170,³⁸ the Water Policy Review Board (subsequently the Water Resources Commission)³⁹ gave notice of a public hearing concerning the proposed hydroelectric project.⁴⁰ In addition, the City applied to the Federal Energy Regulatory Commission (FERC) for an exemption from the licensing requirements of the Federal Power Act.⁴¹

33. Under the Public Utilities Regulatory Policies Act of 1978, an electric facility is obligated to purchase power at the utility's "avoided cost." See 16 U.S.C. § 824a-3 (1988).

34. Application for Permit to Appropriate Surface Water No. 63,286 (Oregon Water Resources Dep't Feb. 16, 1982) [hereinafter Application] (City of Portland, applicant).

35. Project Order, *supra* note 25, at 4. The City originally estimated the project would produce revenues of \$400,000 to \$500,000, but changed its figures during the ensuing proceedings. See *id.* at 3.

36. Respondent's Brief, *supra* note 30, at 5.

37. See Application, *supra* note 34. The City installed the pump turbines after getting a groundwater permit but before applying for an operation permit for the hydroelectric facility. Telephone interview with Bruce Nias, Deputy Director, Water Quality and Envtl. Poly Div., City of Portland Water Bureau (Feb. 2, 1990).

38. The Water Resources Commission is required to hold a public hearing if an applicant for a water permit proposes to develop a hydroelectric project in excess of 100 theoretical horsepower or if the proposed use may adversely affect the public interest. OR REV STAT § 537.170(1) (1989).

39. See *supra* note 12.

40. Notice of Public Hearing (Water Pol'y Rev. Bd. Aug. 5, 1982).

41. Pending completion of the City's study, the exemption from the Federal Power Act's licensing requirements was eventually granted in part based on interim minimum flows approved by the Oregon Department of Fish and Wildlife, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service. 28 F.E.R.C. ¶ 62,297 (Aug. 29, 1984). See letter from Dale R. Evans, Div. Chief, Nat'l Marine Fisheries Serv. and the Nat'l Oceanic and Atmospheric Admin., to William H. Young, Director, Water Resources Dep't (July 5, 1984). Under 16 U.S.C. § 817 (1988) (section 23(b) of the Federal Power Act), a license from FERC is required

Further, upon the recommendations of the Oregon Department of Fish and Wildlife, the National Marine Fisheries Service, and the U.S. Fish and Wildlife Service, the City commissioned a study to determine the minimum stream flows necessary to maintain fish habitat in the Sandy River Scenic Waterway.⁴² While these studies were underway, several citizens and groups concerned with the Sandy River sought to intervene in the permitting process.

Individual citizens, the Oregon State Parks and Recreation Division, Multnomah County, and others opposed the project, claiming that the Scenic Waterways Act applied to the diversion upstream from the Sandy Scenic Waterway and that the diversion could harm recreation, fish, and wildlife in the scenic waterway. These parties also contested the project's economic viability and the City's need for the additional electrical power.

During the ensuing proceedings, the Commission agreed that the Act applied to the City's project.⁴³ The City originally proposed that the project operate only from October through June and maintain minimum flows for fish of 450 to 850 cfs.⁴⁴ Based on the study of minimum stream flows and testimony given at the proceedings, the Commission found that minimum flows needed for recreation, fish, and wildlife ranged from 1500 to 2000 cfs dur-

in order to "construct, operate, or maintain any dam, water conduit, reservoir, powerhouse, or other works incidental thereto across, along, or in any of the navigable waters of the United States, or upon any part of the public lands or reservations of the United States . . ." However, FERC may exempt small projects of five megawatts or less in certain cases after consulting the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and the State Fish and Wildlife agency. See 16 U.S.C. § 823(a); 18 C.F.R. § 4.101 (1990).

42. Project Order, *supra* note 25, at 6; See 16 U.S.C. § 797(e); see also *infra* note 141 and accompanying text.

43. The Board relied at least in part on the advice of its attorney, Larry D. Thomson, who argued that by its own rule, the Water Policy Review Board requires hydroelectric projects outside of, but adversely affecting, a scenic waterway to "be consistent with the designated use as determined by the Board after considering the recommendation of the administering [sic] agency." OR ADMIN. R. 690-74-020(2) (1985). Oregon Administrative Rule 690-74-020 was adopted after the City's application hearing was scheduled and so did not apply to the project. However, because the City asserted that the Scenic Waterways Act flow requirements would be met, Thomson recommended that the City "not object to the application of the Scenic Waterways Act and supporting rules." Letter from Larry D. Thomson, Assistant Chief Counsel, Gen. Counsel Div., Dep't of Justice, to the Water Pol'y Review Board (Apr. 1, 1985).

44. Project Order, *supra* note 25, at 3, 6.

ing spring and summer months. The Commission also ordered that the project could operate only from December through May.⁴⁵ Upon the Oregon Department of Fish and Wildlife's recommendation,⁴⁶ the Commission issued its Amended Order dated April 11, 1986, granting the City a permit to divert up to 170 cfs from the Bull Run River from December 1 through May 31 of each year, provided the minimum stream flow requirements were met.⁴⁷

Owners of property within or adjacent to the Sandy River Scenic Waterway, and users of the protected segment (Petitioners), sought judicial review.⁴⁸ Petitioners first argued that, even though the diversion was upstream of a scenic waterway, the Scenic Waterways Act applied because the diversion could adversely affect the scenic waterway. Second, they argued that section 390.835(1) of the Act required the Commission to determine if the diversion is necessary to human, livestock, or other beneficial uses and was consistent with the Act. Third, Petitioners argued that the Commission failed to make such findings. Fourth, Petitioners argued that the City failed to define the term "free-flowing" in the Act. Fifth, they claimed the City failed to assess properly, and support with substantial evidence, its minimum flow calculations for recreation, fish, and wildlife. Finally, they argued that the Commission did not correctly evaluate the economic and other benefits of the project as required by ORS section 537.170(5).⁴⁹

45. *Id.* at 9. As a tributary of the Columbia River, the Sandy River had been withdrawn from appropriation and storage, except that tributaries of the Sandy River are open to appropriation and storage from December 1 to June 1 of each year. OR. REV. STAT. § 538.251(4)(d) (1989).

46. Letter from John R. Donaldson, Director, Oregon Dep't of Fish and Wildlife, to Bud Clark, Mayor of Portland (Sept. 4, 1985) (approving minimum flows for fish established by the City's study).

47. Project Order, *supra* note 25, at 9.

48. *Diack v. City of Portland*, 85 Or. App. 255, 736 P.2d 198 (1987), *rev'd*, 306 Or. 287, 759 P.2d 1070 (1988). Petitioners included two private citizens, the Portland Area Recreation Coalition, the Nature Conservancy, River Trails, Inc., and Oregon Trout, Inc. The Portland Area Recreation Coalition, so named because of its acronym (PARCA), consisted of people who owned property on the Sandy River Scenic Waterway or who used the scenic waterway, including Multnomah County and a local Greek Orthodox church. Potter Interview, *supra* note 32.

49. See generally Petitioner's Brief and Abstract of Record, *Diack v. City of Portland*, 85 Or. App. 255, 736 P.2d 198 (1987), *rev'd*, 306 Or. 287, 759 P.2d 1070 (1988).

Both the City and the Commission argued that the Act did not apply because the proposed diversion was not from within a scenic waterway. Both argued that, even if the Act did apply, the proposed project would leave sufficient water flows to support recreation, fish, and wildlife in the Sandy River Scenic Waterway. They denied that "free-flowing" or other terms in the Act needed clarification and argued that the projected revenues were accurately calculated and that the project was in the public interest.⁵⁰

The Oregon Court of Appeals affirmed the Commission's order granting the City's diversion permit.⁵¹ While acknowledging the Commission's duty to preserve stream flows necessary for fish, recreation, and wildlife as the highest and best uses in scenic waterways, the court found that the findings required by ORS section 390.835(1) did not apply to upstream diversions of water.⁵² The court found that the evidence sufficiently supported the Commission's calculations of minimum flows for recreation, fish, and wildlife in the Sandy Scenic Waterway.⁵³

Interestingly, the City of Portland, the Water Resources Commission, and the Oregon Court of Appeals agreed that the Commission must preserve stream flows in scenic waterways at levels sufficient for recreation, fish, and wildlife. Each relied on an Oregon Attorney General opinion which concluded that, because the Act declares that the highest and best uses of waters within scenic waterways are recreation, fish, and wildlife, the flows necessary for these uses must be maintained.⁵⁴

50. See generally Respondent's Brief, *supra* note 30; Respondent's [Oregon Water Resources Department] Brief, *Diack v. City of Portland*, 85 Or. App. 255, 736 P.2d 198 (1987), *rev'd*, 306 Or. 287, 759 P.2d 1070 (1988).

51. *Diack v. City of Portland*, 85 Or. App. 255, 736 P.2d 198 (1987), *rev'd*, 306 Or. 287, 759 P.2d 1070 (1988).

52. 85 Or. App. at 258-59, 736 P.2d at 200-01.

53. *Id.* at 259, 736 P.2d at 201.

54. The opinion letter stated: ORS 390.835(1) declares that recreation, fish and wildlife are the highest and best uses of waters within scenic waterways. The free-flowing character of those waters is to be maintained in quantities necessary for the declared highest and best uses. This obligation, addressed to the Water Resources Director, comes before the authorization to him to permit diversions of the waters for other purposes. So long as the quantity of water within scenic waterways is sufficient to provide for the highest and best uses, then any additional beneficial use of the waters will not defeat the purpose of intent of the Scenic Waterways System.

By implication, the Act requires that to ensure that these highest and best uses are met, the Water Resources Department must determine the flows necessary for recreation, fish, and wildlife before allowing any diversions from within or above a scenic waterway. Thus, the issue litigated was whether, for any proposed water diversion, ORS section 390.835(1) required the Department to make "a finding that such diversion is necessary to uses designated in subsection (12) of ORS 536.310 (referring to human, livestock, and other beneficial uses)."⁵⁵ The City and the Commission argued that "findings of necessity" were not required when the diversion was from outside a scenic waterway. The Court of Appeals agreed.

C. The Oregon Supreme Court's Opinion

The Oregon Supreme Court reversed the Court of Appeals and denied the City's diversion permit. In so doing, the court first considered whether the City had a pre-existing right to Bull Run River water that precluded the Commission's review of the proposed project. The City had initially raised this issue by a letter accompanying its permit application and later raised the question on appeal to the Oregon Supreme Court.

The City based its claim of a pre-existing right to the exclusive use of Bull Run water on a 1909 legislative grant.⁵⁶ The court

Opinion letter from Donald C. Arnold, Chief Counsel, Gen. Counsel Div., Dep't of Justice, to Fred D. Miller, Director, Dep't of Transp. 8-9 (May 11, 1983) (emphasis in original).

55. OR REV STAT § 390.835(1) (1989); see *infra* note 68.

56. As originally enacted in 1909, ORS § 536.420 reads as follows:

The exclusive right to the use of the waters of Bull Run and Little Sandy rivers is hereby granted to the city of Portland, and all rights to the waters of the lakes, rivers and streams of this State heretofore acquired for the purposes of municipal water supply are hereby confirmed, and no rights which shall be acquired under this act shall impair the rights of any municipal corporation to waters heretofore taken. The Board of Control shall reject, or grant, subject to municipal use, all applications where, in its judgment, the appropriation of the waters applied for impair a municipal water supply. It shall be the duty of municipal corporations of the State, on request of the State Engineer, to furnish to him a statement of the amount and source of the municipal water supply, with probable increase or extension of the same; provided, that this act shall not be deemed or held to and shall not impair the rights of any person, association or corporation who may, at and prior to the time this act is filed in the office of the Secretary of

dismissed the argument after determining that the statute, as originally enacted, applied to municipal uses of water; hydroelectric uses were covered by other statutes.⁵⁷ The court held that the legislature granted the City the exclusive right to the Bull Run and Little Sandy Rivers water supplies but did not grant the City pre-existing rights to such waters for hydropower generation.⁵⁸ The Commission, thus, had properly exercised jurisdiction over the City's application.

Next, the court considered the Act's effect on the City's application. Specifically, the court considered the effect of ORS section 390.835(1)⁵⁹ on the Commission's permitting process. The Act prohibits or limits water impoundments and placer mining, as well as dredge and fill activities, on waters within a scenic waterway. However, as a result of amendments passed in 1973, the provision governing the construction or use of water diversion facilities is not specifically limited to waters "within scenic waterways." The Petitioners contended that this change was deliberate and a result of legislative intent to protect scenic waterways from upstream diversions. Contrarily, the City argued that, considering the Scenic Waterways Act as a whole, the omission was a clerical error and there was no legislative intent to support the Petitioners' arguments.

After examining the Act's language, legislative history, and 1973 amendments, the court agreed with the Petitioners that the change was intended to protect scenic waterways from upstream diversions. The court interpreted the Act to prohibit water diver-

State, have any vested right to or valid appropriation or bona fide notice of appropriation of the waters of either the Bull Run or the Little Sandy river, under laws heretofore in effect or under any valid contract or deed of conveyance heretofore made with or by the city of Portland.

1909 Or. Laws, 216, § 71.

57. *Diack v. City of Portland*, 306 Or. 287, 293-95, 759 P.2d 1070, 1073-74 (1988).

58. *Id.* In a letter to the Water Resources Department, Larry D. Thomson concluded that the Water Policy Review Board had at least limited jurisdiction over the City's project because the City's interest was probably subject to "general policy considerations which are vested in the state's water resources agency." Letter from Larry D. Thomson, Assistant Chief Counsel, Gen. Counsel Div., Dep't of Justice, to Chris L. Wheeler, Deputy Director, Water Resources Dep't (Nov. 9, 1983). Thomson also suggested that, arguably, the grant to the City was for its municipal supply only and not power generation. *Id.*

59. See *infra* note 68 and accompanying text.

sions which could affect a scenic waterway unless the Commission first determined that the diversion was necessary to uses listed in ORS section 536.310(12).⁶⁰ Thus, the court held that "no diversion of water that otherwise would enter a scenic waterway may be permitted unless the requirements of ORS 390.835(1) are met."⁶¹ The court remanded the case to the Commission to determine whether the City's proposed diversion was necessary to beneficial uses designated in ORS section 536.310(12).

In addition, the court remanded the case to the Commission to recalculate the economic value of the project, taking into account the increased minimum stream flows the Commission would have required the City to maintain.⁶² In calculating that revenues would amount to \$216,000 in the project's first year of operation, the City had assumed that the minimum stream flows would be 450 to 850 cfs and that it would operate nine months out of the year.⁶³ However, under the permit granted, the City was required to maintain minimum stream flows of between 1500 and 2000 cfs and could operate for only six months per year.⁶⁴ The projected revenues had not been recalculated to reflect these changes.

The court also remanded the case to the Commission to explain how it applied the provisions of ORS section 537.170(5)(b). This section governs certain hydroelectric power projects and requires the Commission to determine whether the project would be

60. *Diack*, 306 Or. at 297-98, 759 P.2d at 1076. OR REV STAT § 536.310 (1989) provides in part:

In formulating the water resources program under ORS 536.300(2), the commission shall take into consideration the purposes and declarations enumerated in ORS 536.220 and also the following additional declarations of policy:

(12) When proposed uses of water are in mutually exclusive conflict or when available supplies of water are insufficient for all who desire to use them, preference shall be given to human consumption purposes over all other uses and for livestock consumption, over any other use, and thereafter other beneficial purposes in such order as may be in the public interest consistent with the principals of chapter 707, Oregon Laws 1955, under the existing circumstances

61. *Diack*, 306 Or. at 298, 759 P.2d at 1076.

62. *Id.* at 298-99, 759 P.2d at 1076-77.

63. Project Order, *supra* note 25, at 3, 6.

64. Project Order, *supra* note 25, at 9.

detrimental to the public interest.⁶⁵ Further, the court held that the term "free-flowing character" was self-explanatory.⁶⁶ The court also held that the Commission's factual findings adequately supported its conclusion that the minimum flows set forth in and required by its order were adequate to protect recreation, fish, and wildlife uses.⁶⁷ In an amicus brief, Multnomah County contended that the Commission's factual findings regarding minimum flows were not supported by substantial evidence in the record. But, because the Petitioners did not raise the issue on appeal, the supreme court did not consider it.⁶⁸

The central issue decided by the supreme court in *Diack* was that the Act applies to upstream diversions and that for any proposed water diversion, the Water Resources Department must find that the diversion is "necessary to uses designated in subsection (12) of ORS 536.310." To evaluate this decision, it is helpful to examine rules of statutory construction and the 1973 amendments to the Scenic Waterways Act.

III. ANALYSIS OF DECISION

A. Statutory Interpretation

The statute at issue, ORS section 390.835, was amended in 1973 to read in part as follows:

(1) [Subject to subsection (12) of ORS 536.310,] It is declared that the highest and best uses of the waters within scenic waterways are recreation, fish and wildlife uses. The free-flowing character of these waters shall be maintained in quantities necessary for recreation, fish and wildlife uses. No dam, or reservoir, or other water impoundment facility shall be constructed or PLACER MINING PERMITTED on waters within scenic waterways. NO WATER DIVERSION FACILITY SHALL BE CONSTRUCTED OR USED EXCEPT BY RIGHT PREVIOUSLY ESTABLISHED OR AS PERMITTED BY THE STATE ENGINEER, UPON A FINDING THAT SUCH DIVERSION IS NECESSARY TO USES DESIGNATED IN

65. OR REV STAT § 537.170(5) (1989) provides in part: "In determining whether the proposed use would impair or be detrimental to the public interest, the Water Resources Commission shall consider . . . (1) the maximum economic development of the waters involved . . . (and) . . . (2) the prevention of wasteful uneconomic, impracticable or unreasonable use of the waters involved."

66. *Diack v. City of Portland*, 306 Or. 287, 290, 759 P.2d 1070, 1077 (1988).

67. *Id.* at 299-300, 759 P.2d at 1077.

68. *Id.* at 300 n.2, 759 P.2d at 1077 n.2.

SUBSECTION (12) OF ORS 536.310, AND IN A MANNER CONSISTENT WITH THE POLICIES SET FORTH UNDER ORS 390.805 TO 390.925. THE STATE ENGINEER SHALL ADMINISTER AND ENFORCE THE PROVISIONS OF THIS SUBSECTION.

(2) No [water diversion] BANK PROTECTION WORKS OR DREDGING FACILITY shall be constructed OR USED on such waters, except as [necessary to uses designated in subsection (12) of ORS 536.310 or as necessary to existing uses of related adjacent land. The submerged and submersible lands under and along such waterways shall not be modified by placing, dredging or by any other means] PERMITTED BY THE DIRECTOR OF THE DIVISION OF STATE LANDS AND APPROVED BY THE STATE LAND BOARD FOR PURPOSES CONSISTENT WITH THE POLICIES SET FORTH UNDER ORS 390.805 TO 390.925 FOR SCENIC WATERWAYS, AND IN A MANNER CONSISTENT WITH THE POLICIES SET FORTH UNDER ORS 541.605 TO 541.660 FOR REMOVAL OF MATERIAL FROM THE BEDS AND BANKS AND FILLING OF ANY WATERS OF THIS STATE. THE DIRECTOR OF THE DIVISION OF STATE LANDS SHALL ADMINISTER AND ENFORCE THE PROVISIONS OF THIS SUBSECTION.⁶⁹

As discussed above, the court struggled with the deletion in the fourth sentence of ORS section 390.835(1) which limited its applicability to waters within scenic waterways. Did the legislature intend to omit the words "on such waters" from the fourth sentence of ORS section 390.835(1)?

Reading the two subsections together, it is arguable, as the City suggested in its Petition for Reconsideration,⁷⁰ that the omission of the words "on such waters" was a drafting error. This oversight could have resulted when what was the fifth and last sentence of subsection (1), relating to submerged and submersible lands, was separated from subsection (1) to form a new subsection (2). After the change, the words "on such waters" only appear in

69. 1973 Or. Laws 756 (additions in capitals; deletions bracketed and italicized). See also *Diack*, 306 Or. at 296, 759 P.2d at 1075. As codified, section two contains the following additional language: "... policies set forth under ORS 541.605 to 541.635 and 541.630 to 541.660 for removal" Or. REV. STAT. § 390.835(2) (1973) (addition in italics). Subsections one and two have since been amended in ways not relevant here, except that the Water Resources Department, under the supervision of the Water Resources Commission, has been substituted for the State Engineer as the body authorized to issue permits for water diversions. 1985 Or. Laws 673. See also *supra* note 12.

70. Petition for Reconsideration of Respondent City of Portland at 6-7, *Diack v. City of Portland*, 85 Or. App. 253, 736 P.2d 198 (1987), *rev'd*, 306 Or. 287, 759 P.2d 1070 (1988).

subsection (2).

The supreme court interpreted the omission as a change deliberately intended by the legislature. Absent evidence to the contrary, the court presumed "that the legislature intended a material change in meaning."⁷¹ Acknowledging the lack of evidence of deliberate legislative intent to make the change, the court found that it was "reasonable to presume that the legislature intended to expand the scope of the fourth sentence in ORS 390.835(1) in order to protect water destined for a scenic waterway."⁷² The court thus disallowed any diversion from waters feeding into a scenic waterway unless the requirements of ORS section 390.835(1) are met.

To support its interpretation, the court held that it was "unwilling to deem a legislative act meaningless unless no other reasonable conclusion is available."⁷³ The court cited two cases in support, one involving the addition of a word⁷⁴ and another involving the meaning of a word before and after amendment.⁷⁵ Neither case required the court to consider an omission in an amended act.

Other sources, however, strongly support the supreme court's interpretation of the 1973 amendments. The legislature has strongly discouraged the judiciary from inserting words into a statute.⁷⁶ In an early case, the court refused to add a direc-

71. *Diack v. City of Portland*, 306 Or. 287, 297, 759 P.2d 1070, 1076 (1988). The court cited *Fifth Avenue Corp. v. Washington County*, in which the court found that because the word "adopt" was retained in the amended statute, the court retained the word's pre-amendment meaning. 282 Or. 591, 597-98, 581 P.2d 50, 54 (1978).

72. *Diack*, 306 Or. at 297-98, 759 P.2d at 1076.

73. *Id.* at 297, 759 P.2d at 1076 (quoting 1000 Friends of Oregon v. Wasco County Court, 299 Or. 344, 358, 703 P.2d 207, 216-19 (1985)). In 1000 Friends, the court concluded that the addition of the word "incorporation" to a provision that already included the word "annexation" was not a meaningless addition and so the two words must have different meanings.

74. 1000 Friends of Oregon v. Wasco County Court, 299 Or. 344, 703 P.2d 207 (1985); see *supra* note 73.

75. *Fifth Ave. Corp. v. Washington County*, 282 Or. 591, 581 P.2d 50 (1978); see *supra* note 71.

76. Or. REV. STAT. § 174.010 (1989) provides:

In the construction of a statute, the office of the judge is simply to ascertain and declare what is, in terms or in substance, contained therein, not to insert what has been omitted, or to omit what has been inserted; and where

tional—i.e., south—to a legal description that had been omitted in an amendment in order to avoid treading on legislative powers.⁷⁷ In a more recent case, the court found that the deletion of the words "for himself" from the definition of the crime of official misconduct in the first degree was deliberate, despite some committee minutes to the contrary.⁷⁸

Another case, *Webb v. State of Oregon*,⁷⁹ offers a somewhat analogous situation. There, the plaintiff contended that a grace period granted to certain violations of highway advertising laws should be extended to another violation to which no grace period was granted. The court recognized the ambiguity caused by the apparent omission but nonetheless denied reading the grace period into the statute, even though the omission rendered the statute unconstitutional.

Generally, absent clear legislative intent, courts will avoid rewriting a statute; the legislature is presumed to intend just what it has written.⁸⁰ As seen in the above examples, Oregon courts have followed this rule of statutory construction, even if such construction renders a statute unconstitutional. Thus, given the language before it, the supreme court in *Diack* properly construed ORS sections 390.835(1) and (2).

B. Legislative History: The 1973 Amendments

The passage of House Bill 3275 in 1973 caused the words "on such waters" to be deleted from the fourth sentence of ORS sec-

there are several provisions or particulars such construction is, if possible, to be adopted as will give effect to all.

77. *City of Athens v. Marion Jack*, 115 Or. 357, 236 P. 760 (1925) (involving the legal description for the City of Athens).

78. *State v. Rodda*, 36 Or. App. 580, 642 P.2d 364 (1982), appeal denied, 293 Or. 146, 651 P.2d 143 (1982).

79. 217 Or. 1, 340 P.2d 968 (1959).

80. "Words used in the unamended sections are considered to be used in the same sense in the amendment. And accordingly, a change in phraseology indicates a change in meaning." SUTHERLAND, STATUTORY CONSTRUCTION § 22.35 (1972) (footnotes omitted). "Words may not be supplied in a statute where the statute is intelligible. . . . where the court simply would think it wise to do so, [or] where the omission is not plainly indicated. . . . Although some courts have been hesitant to supply or insert words, the better practice requires that a court enforce the legislative intent or statutory meaning where it is clearly manifested." 2 *Id.* § 47.38 (1972) (footnotes omitted; emphasis added).

tion 390.835(1).⁸¹ As the court noted in *Diack*, the legislative history does not explain this deletion.⁸²

In addition to this change, however, several other changes pertinent to this discussion were enacted by House Bill 3275. First, a new subsection (2) was drafted to deal with dredge and fill operations. Second, the introductory clause to subsection (1), "Subject to subsection (12) of ORS 536.310," was deleted. Third, the clause "in a manner consistent with the policies set forth under ORS 390.805 to 390.925 [the Scenic Waterways Act]" was added to the fourth sentence of subsection (1). While these changes were not directly at issue in the *Diack* litigation, examining these changes and their historical context is helpful.

1. Dredge and Fill in Scenic Waterways: The New Subsection (2)

There is no question but that a major impetus behind the 1973 amendments was a desire to change the inflexibility of the Scenic Waterways Act with respect to dredge and fill operations. For instance, landowners in central Oregon living on the John Day Scenic Waterway were rebelling against the Act's prohibition on erosion control. In 1973, the administrator of the Scenic Waterways System, Bob Potter, sought to change the Act to render it more flexible.⁸³ He insisted, however, that any work on the bed or banks of the scenic waterways be in line with scenic waterway policies. This change is evident in the revised statute.⁸⁴

Others rallied to aid landowners living adjacent to scenic wa-

81. 1973 Or. Laws 756; see *supra* note 69 and accompanying text.

82. *Diack v. City of Portland*, 306 Or. 287, 297, 759 P.2d 1070, 1076 (1988). Sometime between June 23, 1973, when Engrossed H.B. 3275 was issued, and June 27, 1973, when Re-Engrossed H.B. 3275 was issued, the introductory clause and adverbial modifier, "on such waters," were deleted. These deletions also appear in related bills as they progressed through the 1973 legislative session. See *infra* note 87.

83. Potter Interview, *supra* note 32. Prior to the Scenic Waterways Act, the Army Corps of Engineers assisted these landowners in riprapping the stream banks, a practice of lining the banks with heavy rock to prevent erosion. This leads to channelling, making the river deeper and thus altering fish habitat. Because the waters are confined, riprapping can contribute to flooding downstream, where the river is not channelled. The day the Scenic Waterways Act was passed, the Corps stopped riprapping the banks of the John Day Scenic Waterway. Three years later, Bob Potter was facing open rebellion from landowners.

84. *Id.*

terways. Fry Farms, Inc., owner of a gravel bar just inside the Rogue River Scenic Waterway at the confluence of the Applegate and Rogue Rivers, enlisted the aid of State Representative Sid Bazett and State Senator Debbs Potts. Both introduced bills with nearly identical proposed amendments to ORS section 390.835(1) to allow removal and fill in scenic waterways if in keeping with the policies of the scenic waterway.⁸⁵ Bazett's measure, House Bill 3275, proceeded through several amendments and eventually passed.⁸⁶ Other bills introduced in 1973 proposed to settle the problem with similar or sometimes identical language.⁸⁷

85. Telephone interview with Debbs Potts, former Oregon State Senator (Jan. 24, 1990); see also *Oregon Scenic Waterways, 1973 Minutes on S. 896 Before Oregon Senate State and Fed. Affairs Comm.*, 57th Leg. (1973) [hereinafter *S. 896 Minutes*] (testimony of Tom Beck, representing Fry Farms); *Oregon Scenic Waterways, 1973 Minutes on H.B. 3275 Before the Senate State and Fed. Affairs Comm.*, 57th Leg. (1973). Debbs Potts sponsored S. 896.

86. 1973 Or. Laws 756.

87. House Bill 2024 was initially intended to empower the legislature, not the Governor, to designate scenic waterways. The bill was modified several times. Its last version designated a segment of the Snake River as a Scenic Waterway. The proposed amendments, eventually passed in H.B. 3275, were added to the bill as it proceeded through the 57th session. These changes were added in response to the gravel bar problem at the confluence of the Applegate and Rogue Rivers. See *Oregon Scenic Waterways Act, 1973 Hearings on H.B. 3024 Before Oregon House Comm. on Envt. and Land Use*, 57th Leg., Exh. 6 (1973) (letter from W.W. Baldersee to Rep. Sid Bazett describing the gravel bar and the need to remove gravel to meet the needs of the local construction industry).

House Bill 2286 was a highly controversial bill which was introduced at Attorney General Lee Johnson's request. This bill also did not pass, but in part it proposed to establish more land use regulations within scenic waterways and require the state to purchase land devalued more than 20% by the scenic waterway designation. The bill also proposed changes to ORS § 390.835(1) nearly identical to changes introduced in House Bill 3275. While these changes were minor in comparison to the bill as a whole, the State Engineer's Office advocated the changes to allow erosion control. See *Oregon Scenic Waterways Act, 1973 Hearings on H.B. 2286 Before Oregon House Envt. and Land Use Comm.*, 57th Leg., Exh. 7 (1973) [hereinafter *H.B. 2286 Hearings*] (statement of Carl L. Rempel).

Two bills, S.B. 39 and H.B. 2142, were passed; they relate to the state's dredge and fill enforcement provisions in ORS §§ 541.605-.680. In the course of discussing these bills, the House Judiciary Committee considered testimony of a representative of Fry Farms, Inc., who requested that S.B. 39 include the amendments to ORS § 390.835(1) that another representative of Fry Farms had requested be made in S.B. 896. See *Oregon Scenic Waterways Act, 1973 Minutes on S. 39 Before the House Judiciary Comm.*, 57th Leg. (1973) [hereinafter *S. 39 Minutes*] (testimony of Phil Parks); see also *S. 896 Minutes supra* note 85 (testimony of Tom Beck).

The 1973 legislature was concerned with dredge and fill operations not just in scenic waterways but in waterways statewide. Prior to 1973, the Division of State Lands issued permits for removal and fill, but the Water Policy Review Board enforced removal and fill laws and regulations. A 1973 amendment gave the Division of State Lands enforcement powers.⁸⁸

The legislature amended House Bill 3275 to reflect this change in administration.⁸⁹ It was logical for the drafters of the 1973 amendments to separate the State Engineer's duties (now the Water Resources Department) relating to appropriations of water from those of the Division of State Lands relating to removal and fill programs. The provision was broken into two subsections, presumably for clarity.

The legislative history thus explains why ORS section 390.835(1) was restructured, but it does not explain other changes to ORS section 390.835(1) implemented by House Bill 3275.

2. Deletion of Introductory Clause: "Subject to Subsection (12) of ORS 536.310"

ORS section 835.390(1), as originally enacted, declared that the highest and best uses of waters within a scenic waterway are recreation, fish, and wildlife uses, *subject to ORS section 536.310(12)*.⁹⁰ ORS section 536.310(12) provides as follows:

In formulating the water resources program under ORS 536.300(2), the [C]ommission shall take into consideration the purposes and declarations enumerated in ORS 536.220 and also the following additional declarations of policy:

(12) When proposed uses of water are in mutually exclusive conflict or when available supplies of water are insufficient for all

88. S. 39, 57th Leg., 1973 Or. Laws 330; Advisory Comm. to the State Land Board, Report on Submerged and Submersible Land in Oregon's Estuaries and Navigable Waterways 27 (Dec. 1972). The Advisory Committee strongly advocated statewide planning and management of the state's river beds. Telephone interview with John Altucker, President of Eugene Sand and Gravel Co. and former member of the Subcomm. on Riparian Rights, Advisory Comm. to the State Land Board (Jan. 24, 1990).

89. See *S. 39 Minutes, supra* note 87.

90. 1971 Or. Laws 1, § 4.

who desire to use them, preference shall be given to human consumption purposes over all other uses and for livestock consumption, over any other use, and thereafter other beneficial purposes in such order as may be in the public interest consistent with the principals of chapter 707, Oregon Laws 1955, under the existing circumstances ⁹¹

91. In its entirety, the 1989 version of ORS § 536.310 essentially provides that in formulating the water resources program under ORS § 536.300(2), the Commission shall take into consideration the purposes and declarations enumerated in ORS § 536.220 and also the following additional declarations of policy summarized below:

- (1) Existing rights are to be protected to the extent not detrimental to public interest;
 - (2) Integration and coordination of uses should be achieved for maximum economic development and benefit of state as a whole;
 - (3) Adequate and safe supplies for human consumption should be maintained;
 - (4) Multipurpose impoundments are preferable to single-purpose impoundments, upstream impoundments are preferable to downstream impoundments, and protection of fish shall be considered;
 - (5) Single-purpose use and exploitation should be discouraged when other uses are in public interest;
 - (6) Groundwater supplies and wildlife should be considered when considering the benefits of drainage;
 - (7) Minimum perennial stream flows for aquatic life, pollution abatement, and recreation are to be encouraged if possible;
 - (8) Watershed development shall be favored;
 - (9) Safeguards against pollution shall be considered when planning recreation use;
 - (10) The sovereignty of the state must be preserved;
 - (11) Watershed conservation is to be encouraged;
 - (12) When proposed uses conflict, preference shall be given to human consumption purposes, then livestock use, and then other beneficial purposes in the public interest;
 - (13) With respect to the South Umpqua River, municipal needs take priority over minimum stream flows to extent necessary for human consumption.
- The 1989 version of ORS § 536.300(2) calls for statewide water resources basin planning:

Based upon said studies and after an opportunity to be heard has been given to all other state agencies which may be concerned, the commission shall progressively formulate an integrated, coordinated program for the use and control of all the water resources of this state and issue statements thereof.

On REV. STAT. § 536.300(2) (1989).

ORS § 536.220 sets out general policies governing water resource planning in the state and calls for a "coordinated, integrated state water resources policy," encouraging the multiple use of water resources, to be developed by the Water Resources Commission through extensive basin planning. On REV. STAT. § 536.220(b).

It appears that the intended meaning of these two clauses read together was that, in times of insufficient flows, human and livestock uses would take priority over recreation, fish, and wildlife uses.⁹² It is not entirely clear, however, if "other beneficial uses" could also take priority over recreation, fish, and wildlife flows. Without the deleted clause, recreation, fish, and wildlife uses are not subject to, and take priority over, all other uses within scenic waterways.

Apparently, no legislative history exists to explain the deletion of the "subject to" clause from House Bill 3275. However, in a related bill, House Bill 2286,⁹³ the Water Resources Board (now the Water Resources Commission) noticed the deletion and requested that the clause be reinserted. The Board stated that, without the clause, the Scenic Waterways Act's policy of declaring recreation, fish, and wildlife as the highest and best uses within scenic waterways would conflict with the policy expressed in ORS section 536.310(12)—that preference shall be given to human and livestock consumption over all other uses.⁹⁴ Despite these requests, the language was not re-inserted, suggesting a deliberate change.

92. See H.B. 2286 Hearings, *supra* note 87, Exh. 1 (testimony of Albert E. Wright, emphasizing the need to give priority to human and livestock uses over all other uses).

93. See *infra* note 87 and accompanying text.

94. A Board representative testified that it would be working with conflicting statutes if the provision for recognition of human consumption and livestock consumption priorities are eliminated from the scenic waterways law. [ORS 390.835(4) requires the Board to "carry out its responsibilities under ORS 536.210 to 536.590 with respect to waters within the scenic waterways in conformity with the provisions of this section." There would be a direct conflict between declarations of legislative policy governing the Board's activities in its own statutes and the directives of the scenic waterways statutes if altered as proposed

The Board recognizes the need to institute protective measures to ensure maintenance of the free-flowing character and aesthetic qualities which originally qualified streams for the scenic waterways system. This water must be protected not only within a Scenic Waterways segment but in the stream system above the Scenic Waterway segment to guarantee water entering the segment. Therefore, it is important that the Board's water use policies be consistent with the directives of the Scenic Waterway Law.

H.B. 2286 Hearings, *supra* note 87, Exh. 1 (testimony of Albert E. Wright (quoting OR. REV. STAT. § 390.835(4) (1989))). The State Engineer supported this position. *Id.*, Exh. 7 (testimony of Carl L. Rempel).

The change may have followed from the events of 1973. In that year, Oregon experienced water shortages, particularly in Central Oregon along the John Day River.⁹⁵ At the time, it was customary for the State Engineer to grant permits for any use despite the flows required by the Scenic Waterways Act.⁹⁶ For example, the State Engineer allowed stream flows in the John Day Scenic Waterway to dwindle to a mere twenty cfs.⁹⁷

Attorney General Lee Johnson issued a short opinion to the Director of the Water Resources Board supporting the practice of ignoring scenic waterway values.⁹⁸ The opinion concluded that, as to minimum perennial stream flows,⁹⁹ the Board must give preference to human and livestock uses over fish uses even if human and livestock uses reduced flows below the amount necessary to support fish life. The opinion did not mention the Scenic Waterways Act and its declaration that the highest and best uses within scenic waterways are recreation, fish, and wildlife.¹⁰⁰ This opinion, and certainly the practice it condoned, may have provided further impetus to delete the priority clause.

Thus, the legislature had reason to seek a change. By eliminating the clause giving preference to human and livestock uses, the legislature allowed recreation, fish, and wildlife uses within scenic waterways to take priority over all others. This strengthening of the Act may have been in exchange for providing adjacent landowners flexibility in bank protection activities,¹⁰¹ a provision that arguably weakens the Act.

3. Addition of the "Consistency" Clause

In 1973, not only were the words "on such waters" deleted from the fourth sentence in ORS section 390.835(1), but a clause

95. Potter Interview, *supra* note 32.

96. *Id.*

97. *Id.*

98. 36 Op. Att'y Gen. 420 (1973).

99. See OR. REV. STAT. § 536.310(7) (1989); see also *supra* note 91; see also *infra* notes 123-124 and accompanying text.

100. In light of the explicit declarations of highest and best uses within scenic waterways, the 1973 amendments removing the priority provision, and the court's decision in *Diack v. City of Portland*, the Attorney General's opinion no longer correctly states the law, if it ever did. See *supra* note 54.

101. See *supra* notes 83-91 and accompanying text.

was added to that sentence that requires new water diversions to be used or constructed "in a manner consistent with the policies set forth" in the Scenic Waterways Act. The Act's policies are to preserve selected rivers in their free-flowing condition, to protect and preserve their natural setting and water quality, and to fulfill other conservation purposes.¹⁰² The 1973 amendment requires the Water Resources Commission to consider these policies when granting diversion permits. This clause appears to have replaced the phrase, "or as necessary to existing uses of related adjacent land," which implies that the legislature was concerned with water diversions outside scenic waterways other than those for "related adjacent land." The new language further suggests a legislative intent to protect scenic waterways from upstream diversions.

4. Summary

The net effect of the 1973 changes to ORS section 390.835 is to increase protection of scenic waterway flows. The deletion of the words "on such waters" from the fourth sentence of ORS section 390.835(1) was accomplished in conformity with other drafting changes and lends support to the *Diack* court's conclusion that the legislature could have reasonably intended to protect scenic waterways from upstream diversions of water.

IV. IMPLICATIONS

A. The Water Resources Commission's Response

Prior to *Diack*, the Water Resources Commission believed that the Scenic Waterways Act applied only to proposed diversions of water from within a scenic waterway. The Commission believed its role in preserving the free-flowing qualities of scenic waterways was to keep the waterway "free of dams, poorly designed diversion structures or other impediments to the use of the river."¹⁰³ *Diack* clarified that the Commission must also consider scenic waterway values when considering proposed appropriations upstream of a scenic waterway. In addition, the Com-

102. OR. REV. STAT. § 390.815 (1989).

103. Minutes of Water Resources Comm'n 4 (July 7, 1989) (available for review at the Water Resources Comm'n).

mission must determine if each proposed new diversion from within or upstream of a scenic waterway, "is necessary to" the uses specified in ORS section 536.310(12). The Commission cannot determine whether a new diversion will adversely affect a scenic waterway without first determining the water flows necessary to maintain recreation, fish, and wildlife uses.¹⁰⁴ Because the Commission had not determined such minimum flows for any scenic waterway except the Sandy River Scenic Waterway, on July 7, 1989, the Commission imposed a freeze on the review of applications for new water uses from within and above scenic waterways.¹⁰⁵ The process of determining the flows necessary for recreation, fish, and wildlife is expected to take until 1992. Initial figures indicated that up to 556 applications may be delayed,¹⁰⁶ and more recent figures suggest that about 1300 applications have been delayed.¹⁰⁷ Roughly half of this backlog, however, was not caused by the *Diack* decision but by more or less routine delays.¹⁰⁸

The Commission has decided that conditional permits cannot be issued in the interim without legislative authorization because the statute requires certain findings. Under analogous Oregon case law, the conditional permit would not be upheld.¹⁰⁹ Further, it is unclear how the Commission will resolve conflicts when not enough water remains to meet the minimum scenic waterway

104. The Department relied on an Assistant Attorney General's letter of advice discussing the implications of *Diack*. Letter from Oregon Assistant Attorney General Anne W. Squier to William R. Blosser and William H. Young (Jan. 20, 1989).

105. Minutes of Water Resources Comm'n S (July 7, 1989) (available for review at the Water Resources Comm'n). Pending applications have been categorized according to type and location of use. See Minutes of Strategic Water Management Group 4-7 (Feb. 15, 1989) [hereinafter Water Management Minutes] (available for review at the Water Resources Comm'n).

106. *Diack Hits Home*, *supra* note 7, at 1-2.

107. Interview with Bill Young, Director of the Water Resources Dep't (Sept. 7, 1990) [hereinafter Young Interview].

108. *Id.* See also Water Management Minutes, *supra* note 105, at 6.

109. Letter from Oregon Assistant Attorney General Anne W. Squier to Beverly Hayes, Water Resources Dep't, (June 12, 1989) (discussing conditional permitting). In one case, the court struck down conditional permits issued by the Fish and Wildlife Commission pending certain determinations. *Federation of Indep. Seafood Harvesters v. Oregon Fish and Wildlife Comm'n*, 291 Or. 452, 632 P.2d 777 (1981). The court held that the Commission had to make findings required by the statute before issuing any permit.

flows. Because the Act declares that the highest and best uses in a scenic waterway are recreation, fish, and wildlife, these uses will take priority over new human, livestock, and other uses of waters flowing into a scenic waterway.¹¹⁰ This is a significant shift in policy, and it is not certain how the Commission will handle it.

B. "Finding of Necessity"

Another area of uncertainty is what findings are required when the Water Resources Department considers diversion permits. As originally drafted in 1970, and as amended in 1973, ORS section 390.835(1) requires that no water diversion permits be granted unless the State Engineer (now the Water Resources Department) first finds that the diversion is "necessary to uses designated in" ORS section 536.310(12). The *Diack* court did not specify precisely what form the finding should take.¹¹¹

A "finding of necessity" could mean that the Department should not issue a water diversion permit within or above a scenic waterway without first determining that the use is not wasteful or frivolous. Under this interpretation, any beneficial use, such as the City's hydroelectric project, could take priority over scenic waterway values if the Department found the use "necessary." This leaves much to agency discretion and could put scenic waterway values at risk. Further, this practice arguably would violate the Scenic Waterways Act because recreation, fish, and wildlife uses are mandated as the highest and best uses within scenic waterways; allowing other uses within or above a scenic waterway without regard for scenic waterway flows could deplete these flows. This interpretation could lead to the same abuse the scenic waterway system experienced in 1973.

Another interpretation is that recreation, fish, and wildlife flows are second in priority only to human and livestock uses.¹¹²

110. Young Interview, *supra* note 107.

111. See *Diack v. City of Portland*, 306 Or. 297, 298, 759 P.2d 1070, 1076 (1988).

112. "Human consumption" is defined as "[u]se of water within a household only for drinking, cooking, and sanitation." OR ADMIN. R. 690-11-010(13) (1990). Less water is allotted for human consumption than for (1) "[d]omestic use," defined as "[u]se of water for human consumption, household purposes, watering livestock necessary for the sustenance of a family and related accessory uses," or for (2) "[d]omestic use expanded," defined as "[u]se of water, in addition to that

The Act's legislative history supports this interpretation.¹¹³ Also, one of the individuals who brought the *Diack* litigation recently offered his opinion that necessary diversions for human and livestock uses are to take priority over recreation, fish, and wildlife flows, probably from within a scenic waterway, and certainly from above.¹¹⁴

It is questionable whether the 1971 reference to ORS section 536.310(12) in the fourth sentence made sense to begin with. Since 1955, chapters 536 to 543 of the Oregon Revised Statutes have governed the administration of Oregon's water laws.¹¹⁵ Under ORS sections 536.220 through 536.540, the Commission is responsible for developing and coordinating policies for the use of the state's water resources, including comprehensive basin planning¹¹⁶ and determining minimum stream flows.¹¹⁷ ORS section 536.310 sets out the "declarations of policy" that the Commission shall consider in developing an integrated water use plan.¹¹⁸ The policy set forth in ORS section 536.310(12) provides that when uses conflict, preference shall be given first to human consump-

allowed for domestic use, for watering up to 1/2-acre of lawn or noncommercial garden." OR. ADMIN. R. 690-11-010(7)-(8) (1990). "Stockwater" is defined as "[u]se of water for consumption by domesticated animals and wild animals held in captivity as pets or for profit." OR. ADMIN. R. 690-11-010(27) (1990).

113. Senate Bill 61, the forerunner of the voter initiative that created the Scenic Waterways Act, was introduced in 1969 by State Senator Don Willner. He testified that § 4 of the Act, which by voter initiative became ORS § 390.835(1), "prohibits dams or other water impoundment facilities to be constructed on scenic waterways and provides that no water diversion facility shall be constructed except as necessary to human consumption and livestock consumption purposes (Oregon Wild and Scenic Rivers Act, 1969: Hearings on S. 61 and S. 62 Before Oregon Senate Fish and Game Comm., 55th Leg., Exh. A (1969) (emphasis added)).

Further, it was clear to Bob Potter that human consumption and livestock uses took precedence over scenic waterway flows. Potter interview, *supra* note 32.

114. Telephone interview with Arch W. Diack (Sept. 10, 1990). See Water Management Minutes, *supra* note 105, at 7.

115. For a somewhat dated overview of Oregon water law, see C. CLARK, SURVEY OF OREGON'S WATER LAWS (1983).

116. OR. REV. STAT. § 536.300 (1989).

117. OR. REV. STAT. § 536.235. "Minimum streamflow," or "minimum perennial streamflow," is defined as "an administrative rule provision adopted in a basin program by the Water Resources Commission or its predecessors to implement ORS 536.235, 536.310(7) and 536.325 and support aquatic life, maintain recreation or minimize pollution." OR. ADMIN. R. 690-77-011(10) (1990).

118. See statute cited *supra* note 91.

tion, then livestock, and then other uses which are in the public interest. These priorities are to guide the basin planning process and not individual permitting decisions.

However, the fourth sentence of ORS section 390.835(1) guides the Water Resources Department when considering an individual application for a diversion permit. The reference in the fourth sentence to ORS section 536.310(12) is confusing because it requires the Department to apply a planning tool to individual diversion permits. Thus, the meaning of the "finding of necessity" is inherently unclear.

It appears that the declaration that recreation, fish, and wildlife are the highest and best uses for waters within scenic waterways conflicts with any provision which might allow other uses to take priority. During Oregon's 1989 legislative session, several amendments were suggested to clarify these issues.

C. Legislative Responses and Proposed Changes

In the 1989 Oregon legislative session, Representative Chuck Norris sponsored House Bill 3059 which would have amended ORS section 390.835(1) to provide that human and livestock uses take priority over scenic waterway uses.¹¹⁹ The proposed changes would have resolved the question of priority among potentially conflicting human, livestock, and scenic waterway uses. But this policy could have had a deleterious effect on scenic waterways if the demand for human uses increased along and upstream of scenic waterways. Such an amendment would have left scenic wa-

119. According to House Bill 3059:

It is declared that the highest and best uses of the waters within scenic waterways are recreation, fish and wildlife uses. The free-flowing character of these waters shall be maintained in quantities necessary for recreation, fish and wildlife uses. HOWEVER, HUMAN AND LIVESTOCK USES SHALL MAINTAIN THE PREFERENCE GRANTED IN ORS 536.310(12). No dam, or reservoir, or other water impoundment facility shall be constructed or placer mining permitted on waters within scenic waterways. No water diversion facility shall be constructed or used except by right previously established or as permitted by the Water Resources Commission, upon a finding that such diversion is necessary to uses designated in ORS 536.310(12), and in a manner consistent with the policies set forth under ORS 390.805 to 390.925. The Water Resources Commission shall administer and enforce the provisions of this subsection.

H.B. 3059, 65th Leg. (1989) (additions to ORS § 390.835(1) are in capitals).

terways vulnerable to the same treatment they received before the 1973 amendments.

State Representative Bill Dwyer proposed instead an amendment that would have allowed the Water Resources Commission to issue permits on a conditional basis until it could determine the flows necessary for scenic waterways.¹²⁰ However, the amendment as originally drafted could not have been implemented because the Commission was still required to determine the flows necessary for scenic waterways before issuing any permit that might affect the scenic waterway.¹²¹ It also would have created expectations of water use that could have caused problems if and when the rights were cut off to protect scenic waterway flows.

Neither of these proposed amendments would have clarified

120. Dwyer's amendment would have changed ORS 390.835(1) by adding the following:

Any right to the use of water for human consumption or livestock use under a permit or certificate issued by the Water Resources Commission on waters flowing into a scenic waterway shall be conditioned on a finding by the Parks and Recreation Division of the Department of Transportation that the diversion evidenced by the permit or certificate will not interfere with the maintenance of a sufficient amount of water in the scenic waterway to carry out the purpose of ORS 390.805 to 390.925. The condition shall further provide that the holder of the permit or certificate may exercise the right so long as the use of water under the right does not interfere with such flow.

H.B. 3059, 65th Leg. (1989).

121. Responding to Rep. Dwyer's request for a draft that would allow issuance of domestic and livestock permits conditioned on later regulation or termination to protect necessary flows, Assistant Attorney General Anne Squier suggested the following language:

(2) The Water Resources Commission may issue a permit for domestic or livestock use of waters that flow into a scenic waterway, without making the findings required by subsection (1) of this section, if the permit is conditioned upon future regulation to maintain necessary scenic waterway flows. The permit may be exercised in full until the commission establishes what flows are necessary for recreation, fish and wildlife purposes in the scenic waterway. After those flows have been established, the commission shall regulate use of water under the permit as necessary to maintain the scenic waterway flows. If a certificate is issued for the use authorized in the permit, the certificate shall be subject to the same conditions. The commission is authorized to issue permits under this subsection only until it has determined what flows must be maintained for recreation, fish and wildlife uses within the scenic waterway.

Letter from Assistant Attorney General Anne W. Squier to State Rep. Bill Dwyer (May 15, 1989).

the "finding of necessity" required by the fourth sentence of ORS section 390.835(1). Additionally, neither proposal adequately addressed the permit backlog problem. In the end, both proposals died in committee and the legislature did nothing.¹²²

Should the legislature reconsider these issues, it is imperative that any conditional permitting power expire after 1992, at which time the Commission expects to complete its stream flow calculations. Otherwise, the process of calculating flows could very well take much longer. The required "findings of necessity" could be clarified simply by specifying that the diversion "is necessary to human consumption or livestock uses," is not wasteful, and will not adversely affect the scenic waterway flows. If the stream flow would be adversely affected, the legislature should elaborate on how the Commission is to resolve the conflict.

Any legislative response will need to be sensitive to public opinion. By passing the Scenic Waterways Act in 1970 and adding more rivers to the system in 1988, Oregon voters in effect decided the highest and best uses of certain river segments without waiting for the basin planning process. The Water Resources Commission and its predecessors could have been more aggressive in setting minimum flows for recreation, fish, and wildlife over the past thirty-five years. Since 1955, the Commission and its predecessors have been under a legislative mandate to maintain minimum stream flows.¹²³ In 1979 and 1983, the legislature passed more legislation directing the Commission to establish minimum perennial stream flows.¹²⁴ Since 1987, the Commission has been charged

122. Telephone interview with Dale Pearson, volunteer lobbyist for Oregon Trout (November 14, 1989). Oregon Trout is an Oregon nonprofit corporation that opposed the bill.

123. ORS § 536.310, originally passed in 1955, provides in pertinent part: In formulating the water resources program under ORS 536.300(2), the [C]ommission shall take into consideration the purposes and declarations enumerated in ORS 536.220 and also the following additional declarations of policy:

(7) The maintenance of minimum perennial stream flows sufficient to support aquatic life, to minimize pollution and to maintain recreation values shall be fostered and encouraged if existing rights and priorities under existing laws will permit.

OR. REV. STAT. § 536.310 (1989). The words "and to maintain recreation values" were added in 1987. See 1987 Or. Laws 546, § 1.

124. ORS § 536.325, originally passed in 1979 and added to in 1983, provides

with granting permits for instream water rights—water rights held by the Department in trust for Oregonians for recreation, fish, conservation, wildlife, pollution abatement, or navigation.¹²⁶

in part:

(1) The Department of Environmental Quality or the State Department of Fish and Wildlife may submit to the Water Resources Commission applications for the establishment of minimum perennial stream flows. The applications shall be in a form specified by the [C]ommission and shall include data on the quantities of water necessary to support fish life or to minimize pollution and other information specified by the [C]ommission.

(2) The [C]ommission, on its own initiative or in response to applications filed under subsection (1) of this section, may establish or modify minimum perennial stream flows. The [C]ommission may establish or modify such minimum perennial stream flows without adopting a new basin program or a comprehensive update of an existing basin program for the affected river basin:

- (a) After considering Water Resources Department staff recommendations;
- (b) After an opportunity to be heard has been given to all other state agencies which may be concerned;
- (c) After considering the provisions of ORS 536.220 [state water policies], 536.300(1) [Commission studies] and 536.310 [purposes and policies]; and
- (d) After holding at least one public hearing in the affected river basin.

(3) Minimum perennial stream flows shall become effective upon adoption by the Water Resources Commission. Notwithstanding ORS 536.320 (2) [sic] or any other provision of law, minimum perennial stream flows shall have as a priority date the date the application for the minimum perennial stream flow was filed, or, if no application has been filed, the date the [C]ommission initiated action to consider the minimum perennial stream flow.

(4) Within one year of the date an application recommending a minimum perennial stream flow is submitted to the Water Resources Commission, the [C]ommission shall:

- (a) Adopt the recommended minimum perennial stream flow;
- (b) Adopt a minimum perennial stream flow at some other rate after making a finding that the other rate is more appropriate for supporting aquatic life and minimizing pollution; or
- (c) Reject the recommended minimum perennial stream flow after making a finding that establishment of a minimum flow is of lesser importance than other uses of the waters of the particular stream.

OR REV. STAT. § 536.325. Further, ORS § 536.235, originally passed in 1983, provides: "It is the policy of the State of Oregon that establishment of minimum perennial stream flows is a high priority of the Water Resources Commission and the Water Resources Department." OR REV. STAT. § 536.235.

125. See OR REV. STAT. §§ 537.332-547.360.

The Department is now in the process of converting established minimum stream flows into instream water rights that will take priority from the date the minimum flows were set.¹²⁷ Priority will date from the date of application. Because the Department did not act aggressively to establish minimum flows for scenic waterway uses, such uses and water rights may have lost priority to other users.

Proponents of Oregon's scenic waterways might argue that the priority of minimum flows and instream water rights for recreation, fish, and wildlife should date from the designation of the river segment as a scenic waterway, or from the designation of minimum flows, whichever is earlier. This argument has strong support because the Act's mandate to preserve the free-flowing qualities of the scenic waterways is explicit, as is the declaration of highest and best uses. The designation of a scenic waterway could be seen as an application for these flows to be established and preserved, and thus the date of designation arguably should be the date of priority.

For now, the Commission is planning to protect scenic waterway flows to the extent that prior uses and natural flows allow. As for upstream diversions, one possible solution to potential conflicts is to allow the upstream appropriator to collect water during high flows and draw from this reservoir during low flows.¹²⁸ The 1989 Oregon legislature funded a new position at the Water Resources Department to help the Parks Department plan recreation flows in scenic waterways.¹²⁹ The Commission has established a strategic plan for determining scenic waterway flows.¹³⁰ The Water Resources Department expects to work with the Parks Department and the Oregon Department of Fish and Wildlife to set flows. For river segments protected under both the Scenic Waterways Act and the National Wild and Scenic Rivers Act, the De-

126. Telephone interview with Rebecca Craig, Administrator, Resource Management Div., Oregon Water Resources Dep't (Sept. 11, 1990). Minimum flows and instream water rights are not uncommon for fish flows and some even predate the Scenic Waterways Act. However, few if any minimum flows or instream rights have been granted for recreation and wildlife uses.

127. Young Interview, *supra* note 107.

128. Telephone interview with Bill Fujii, Recreation Coordinator, Resource Management Div., Oregon Water Resources Dep't (Sept. 11, 1990).

129. See Memorandum from Bill Young, Director of the Water Resources Dep't, to the Water Resources Comm'n (July 7, 1989).

partment will work with the federal agency having jurisdiction, most likely either the Bureau of Land Management or the U.S. Forest Service. The Commission will also hold public workshops.¹³⁰

It is unfortunate that the flows necessary to protect scenic waterway values are only now being assessed. One reason for the delay in setting minimum flows for fish, and particularly recreation and wildlife, is the Water Resources Department and its predecessors' former mission.¹³¹ Historically, the Department and its predecessors focused on settling disputes among appropriators and granting as many permits as possible. More recently, the Department sees its role as a planner, administrator, and trustee for public uses. Its records are not accurate and its resources are limited, which further delays the basin planning process and the establishment of minimum flows. As the planning proceeds, the Commission will develop policies within the Department for dealing with competing uses.

D. Other Issues

1. Water Quality

It is unclear as yet whether *Diack* will affect water quality issues in the state. Specifically, nonpoint sources of pollution—such as runoff from timber harvesting, agriculture, and urban areas¹³²—may be at risk if such runoff interferes with scenic waterway values. For instance, sedimentation from timber harvesting can coat the spawning beds of anadromous fish with silt and destroy breeding habitat. In such a case, both the quantity and quality of flow are important to protecting and preserving fish

130. See, e.g., Letter from Bill Fujii, Recreation Coordinator for the Resource Management Div., Oregon Water Resources Dep't., to interested parties (Aug. 28, 1990) (inviting public to take part in two-day workshop setting recreational flow needs for the John Day Scenic Waterway).

131. Young Interview, *supra* note 107.

132. Nonpoint sources are distinguished from point sources, which are defined in the federal Clean Water Act as "any discernible, confined and discrete conveyance," such as a pipe, ditch, conduit, or well. 33 U.S.C. § 1362(14) (1988). Point sources are regulated by permits. *Id.* § 1342. For a concise explanation of state water quality planning under the Clean Water Act, particularly with regard to timber practices, see Anderson, *Water Quality Planning for the National Forests*, 17 *Env'tl. L.* 591 (1987).

values.

Water quality issues are governed in part by the federal Clean Water Act¹³³ and are handled in Oregon by the Department of Environmental Quality (DEQ). DEQ cites a lack of resources to monitor the effects of siltation on fish habitat at specific sites as the reason for not developing adequate protection for fish flows in the state.¹³⁴ As for standards necessary to protect water quality for recreation, DEQ argues that establishing standards is difficult because the methodology is difficult to develop.¹³⁵ Due to inadequate staffing at DEQ, developing standards for any scenic waterway values, or any of the values sought to be protected in the National Wild and Scenic Rivers Act, is not a priority.

2. City of Portland's Municipal Water Supply

Another issue that may arise relates to Portland's exclusive use of the Bull Run and Sandy Rivers waters, granted by the legislature in 1909.¹³⁶ The City's municipal water rights predate scenic waterway and minimum stream flow designations; thus, the City has the right to reduce these flows as needed for its municipal water. In 1989, the legislature potentially expanded the demand on the Bull Run and Sandy Rivers by granting the City the right to sell its water to other municipalities and water districts in the Portland metropolitan area.¹³⁷

The Water Resources Commission is now developing its Sandy River Basin Program.¹³⁸ It appears that flows in the Sandy River are inadequate to meet both the recorded water rights and scenic waterway uses, especially during summer months.¹³⁹ Thus, future municipal water demands pose a real threat to the Sandy

133. 33 U.S.C. §§ 1251-1376 (1988).

134. See Oregonian, Sept. 19, 1990, at A14, col. 3 (quoting Roger Wood, Water Quality Specialist, Oregon Dep't. of Envtl. Quality); telephone interview with Neil Mullane, Manager of the Standards and Assessment Section, Oregon Dep't. of Envtl. Quality (Sept. 24, 1990) [hereinafter Mullane Interview].

135. Mullane Interview, *supra* note 134.

136. See *supra* note 54 and accompanying text.

137. 1989 Or. Laws 707.

138. See Oregon Water Resources Dep't., Draft Sandy River Basin Program (1990).

139. See *supra* section IIC. Many of the water rights of record are not actually used in full amounts. Interview with Amin Wahab, Program Dev. Coordinator, Oregon Water Resources Dep't. (Sept. 21, 1990).

River Scenic Waterway. The City should not be allowed to sell its water to other municipalities if alternative sources are available and if the Sandy Scenic Waterway will be harmed. Political will, conservation, and the possibility of new water sources may prevent or reduce harm to scenic waterway values.

V. DIACK IN PERSPECTIVE

A. Diack's Extraterritorial Protection

In holding that no water that would otherwise enter a scenic waterway may be diverted unless the requirements of ORS section 390.835(1) are met, the court interpreted the Scenic Waterways Act to protect against adverse extraterritorial uses. Other environmental statutes are not interpreted so broadly.

For example, the United States Supreme Court was not so generous in its interpretation of section 4(e) of the Federal Power Act.¹⁴⁰ Section 4(e) authorizes FERC to issue licenses for the construction, operation, and maintenance of hydroelectric projects located on public lands and reservations, including Indian reservations. Before a license is issued "within any reservation," FERC must determine that the license will not interfere or be inconsistent with the purpose for which the reservation was created or acquired. Issuance of a license also depends upon other conditions as the secretary of the department with supervisory authority over such lands deems necessary to protect such lands. In *Escondido Mutual Water Co. v. La Jolla Band of Mission Indians*,¹⁴¹ the Court relied on the plain meaning of the statute and held that FERC need not make such "inconsistency" findings unless the

140. 16 U.S.C. § 707(e) (1988). This section provides that the Federal Energy Regulatory Commission may

issue licenses . . . for the purpose of constructing . . . dams . . . or other project works . . . upon any part of the public lands and reservations of the United States . . . Provided, That licenses shall be issued within any reservation only after a finding by the Commission that the license will not interfere or be inconsistent with the purpose for which such reservation was created or acquired, and shall be subject to and contain such conditions as the Secretary of the department under whose supervision such reservation falls shall deem necessary for the adequate protection and utilization of such reservations . . ."

Id. (emphasis added).

141. 466 U.S. 765 (1984).

proposed project is actually located within the reservation.¹⁴² Thus, the findings are not required for projects outside the boundaries of the reservation.

Oregon's Scenic Waterways Act is significantly different than the Federal Power Act, and a full comparison is not intended here. From a statutory construction perspective, however, the *Diack* ruling was consistent with *Escondido*. Just as the words "within any reservation" in *Escondido* limited the impact of the provision to reservation projects, the absence of the words "within scenic waterways" or "on such waters" from the fourth sentence in ORS section 390.835(1) expanded the scope of the provision to diversions from any waters feeding into, or located within, a scenic waterway.

B. The National Wild and Scenic Rivers Act

Most of the state protected rivers are also protected under the National Wild and Scenic Rivers Act.¹⁴³ This act differs significantly from Oregon's Scenic Waterways Act, but it is helpful to evaluate how much protection the federal act offers free-flowing rivers.

The federal act's policy is similar to that of the Scenic Waterways Act. The federal act seeks to complement the national policy of impounding free-flowing rivers with a policy of preserving selected rivers in their free-flowing state.¹⁴⁴ The federal act seeks to protect the "remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values"¹⁴⁵ of the free-flowing rivers and provides for a process of designating rivers for protection and study.¹⁴⁶ FERC is prevented from licensing any project "on or directly affecting any" protected river, and other agencies are prevented from assisting "by loan, grant, license, or otherwise, in the construction of any water resources project that would have a direct and adverse effect on the values for which such river" was selected for protection.¹⁴⁷ Upstream or

142. *Id.* at 760.

143. 16 U.S.C. §§ 1271-1287 (1988); see *supra* notes 1-5 and accompanying text.

144. 16 U.S.C. § 1271.

145. *Id.*

146. *Id.* §§ 1275-1276.

147. *Id.* § 1278(a).

downstream developments are not precluded if they "will not invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of designation"¹⁴⁸ These standards are flexible and uncertain, leaving much to agency discretion, and are only beginning to be subjected to court interpretation.¹⁴⁹

The Secretary of the Interior, Secretary of Agriculture, or the head of any agency having jurisdiction over a protected river segment is to administer the federal act "in such manner as to protect and enhance the values which caused it to be" protected.¹⁵⁰ Management plans are required as necessary to protect the rivers, paying "[p]articular attention . . . to scheduled timber harvesting, road construction, and similar activities which might be contrary to the purposes of" the federal act.¹⁵¹ Cooperation with state and local governments in developing plans and administering the act is encouraged.¹⁵² In addition, the federal agencies are to work with the Environmental Protection Agency or the Oregon Department of Environmental Quality, for "the purpose of eliminating or diminishing the pollution of waters" of the protected river segments.¹⁵³

As for water flows within federal wild and scenic rivers, Congress probably intended to reserve water rights by negative implication. Section 13 of the federal act provides that the "[d]esignation of any stream or portion thereof as a national wild,

148. *Id.*

149. See, e.g., *Swanson Mining Corp. v. Federal Energy Regulatory Comm'n*, 790 F.2d 96, 102-03 (D.C. Cir. 1986) (interpreting 16 U.S.C. § 1278(a) as preventing FERC from issuing an exemption for construction of a project "on or directly affecting" a protected river as well as construction having an "adverse effect" on any protected values).

150. 16 U.S.C. § 1281(a) (1988).

151. 16 U.S.C. § 1283(a). This provision has been interpreted as requiring the federal agency to develop management plans. See *Wilderness Soc'y v. Tyrrel*, 701 F. Supp. 1473, 1487-88 (E.D. Cal. 1988). For rivers designated on or after January 1, 1986, 16 U.S.C. § 1274(d) requires that federal agencies develop "comprehensive management plans" for rivers within three years of the date of designation. 16 U.S.C. § 1274(d).

152. 16 U.S.C. §§ 1281(e), 1284.

153. *Id.* § 1283(c). See *Tyrrel*, 701 F. Supp. at 1488-89 (finding that the U.S. Forest Service apparently had not cooperated with state water quality agencies in planning to allow timber harvesting in an area adjacent to a protected river segment).

scenic or recreational river area shall not be construed as reservation of the waters of such streams for purposes other than those specified in this chapter, or in quantities greater than necessary to accomplish these purposes."¹⁵⁴ The amounts reserved will probably equal the amount necessary to preserve scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values for which the river segments were protected.¹⁵⁵ The priority of the reserved water right will probably begin either from the date the stream is designated for study or the date it is included in the system.¹⁵⁶ These issues have yet to be clarified, legislatively or judicially.

In Oregon, the planning process among federal agencies is proceeding slowly, in large part because of inadequate funding.¹⁵⁷ In addition, a methodology to develop flows for "scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values" has been difficult to develop.¹⁵⁸ The federal act allows three years to develop a plan for rivers designated for inclusion in the system on or after January 1, 1986,¹⁵⁹ but without funding the deadlines are likely to be extended.¹⁶⁰ The federal agencies intend to work with state agencies to develop plans for those rivers protected under both the state and federal acts. Additionally, they will probably rely on the data the state agencies develop for recreation, fish, and wildlife flows. Public comments will be invited.¹⁶¹

The federal wild and scenic river system, while extensive, has not yet accomplished the goal of protecting Oregon's rivers. A great deal of planning has yet to be completed. Many provisions in the federal act are ill-defined, and the status of reserved water

154. 16 U.S.C. § 1284(c) (1988); see also *BALDWIN, WATER RIGHTS AND THE WILD AND SCENIC RIVERS ACT* (U.S. Cong. Research Serv., 1990): 86 Interior Dec. 553, 607-09 (1979); Tarlock & Tippy, *The Wild and Scenic Rivers Act of 1968*, 55 CORNELL L. REV. 707, 733-38 (1970).

155. See *BALDWIN*, *supra* note 154, at 6-7; 86 Interior Dec. 553, 608-09 (1979).

156. See *BALDWIN*, *supra* note 154, at 14; Tarlock & Tippy, *supra* note 154, at 736-38.

157. Telephone interview with Ken White, Outdoor Recreation Planner, Oregon State Bureau of Land Management (Sept. 18, 1990) [hereinafter *White Interview*].

158. *Id.*

159. 16 U.S.C. § 1274(d) (1988).

160. *White Interview*, *supra* note 157.

161. Telephone interview with Jackie Dedrich, Administrator, Wild and Scenic Rivers Program, U.S. Forest Serv. (Sept. 14, 1990).

rights is uncertain. Oregon's Scenic Waterways Act, particularly as a result of the *Diack* litigation, has been much more effective in determining the flows necessary to maintain scenic waterway values and planning for these values.

VI. CONCLUSION

Diack will probably prove to be one of the most significant cases the Oregon Supreme Court has decided with respect to the allocation of natural resources. While the Water Resources Commission has long been charged with protecting the recreation, fish, and wildlife flows in scenic waterways, it was not until *Diack* that the state began calculating the flows necessary to maintain these objectives. The court decided *Diack* according to long standing rules of statutory construction that strongly discourage judicial redrafting of statutes when the relevant legislative history does not clearly support a change. It was reasonable for the court to conclude that the legislature intended to grant the scenic waterways extraterritorial protection from upstream diversions. Plainly such protection is necessary if the waterways are to remain free-flowing.

The legislature should clarify what is required by the finding of necessity for each new proposed water diversion. Particular care should be given to implement the will of Oregon voters to preserve scenic waterways. In order to protect scenic waterways, and especially fish habitat, upstream development, including timber harvesting, may be affected. The Commission, the Parks Department, and the DEQ should be alerted to these concerns.

Oregon is unique in its number of pristine rivers and for its protection of them. *Diack* offers the Water Resources Commission and other state agencies an opportunity to put the designation of scenic waterway flows at the top of their agenda. Federal and state agencies should work together to develop plans to protect the state's free-flowing rivers.

Diack gives the commonsense protection necessary to maintain scenic waterways. The case also emphasizes the need for comprehensive planning to ensure the harmonious use of water resources in the years ahead, when competition for water use is certain to intensify. The Commission and other agencies can use this opportunity to strengthen their funding, staffing, and ultimately to improve their service to Oregonians. With strong and

creative leadership, Oregon can better protect its free-flowing waters.

Argued and submitted January 19, the decisions of the Court of Appeals and Water Resources Commission reversed and remanded to Water Resources Commission July 26, reconsideration denied September 20, 1988

**In the Matter of the Permit
Application No. 63266 - City
of Portland Hydroelectric Power
Diversion from Bull Run River**

**DIACK et al,
Petitioners on Review,**

v.

**CITY OF PORTLAND et al,
Respondents on Review.**

(WPRB 63266; CA A37696; SC S 34223)

759 P2d 1070

On petition for judicial review of order of the Water Resources Commission granting city a permit to divert water for generation of hydroelectricity, the Court of Appeals, Warden, J., 85 Or App 255, 736 P2d 198, affirmed. On petition for review, the Supreme Court, Gillette, J., held that provisions of Scenic Waterways Act, requiring showing that proposed diversion was necessary to a beneficial use, applied to proposed diversions, in city's application for permit to operate hydroelectric facility, of water that otherwise would flow through scenic waterway.

Reversed and remanded

1. Administrative law and procedure Powers and proceedings of administrative agencies, officers and agents

Agency's jurisdiction cannot be conferred by stipulation of the parties.

2. Courts Nature, extent, and exercise of jurisdiction in general

Party may not waive jurisdictional issue by "acquiescence."

3. Electricity Generating facilities in general

Water Resources Commission had authority to consider city's application for permit to divert water for hydroelectric generation. ORS 536.067(6), 536.320(2), 537.010 et seq, 537.130, 537.282, 537.299, 538.420.

4. Electricity Environmental considerations in general

Provisions of Scenic Waterways Act, requiring showing that proposed diversion was necessary to a beneficial use, applied to proposed diversions, in city's application for permit to operate hydroelectric facility, of water that otherwise would flow through scenic waterway. ORS 390.835(1), 536.310(12).

5. Electricity Generating facilities in general

Water Resources Commission's findings that accepted the revenue generated capability of city's proposed hydroelectric project did not support its conclusion that project, operating under restrictions imposed, would be of sufficient economic value to justify issuing a permit. ORS 390.835(1), 536.310(12).

6. Waters and water courses Appropriation and prescription

Phrase "the free flowing character" of the waters within the scenic waterway, in Scenic Waterways Act, did not establish separate statutory standard. ORS 390.835(1).

7. Waters and water courses Appropriation and prescription

Requirement in Scenic Waterways Act that free flowing character of water "be maintained in sufficient quantities necessary for recreation, fish and wildlife uses," set standard that Water Resources Commission was obligated to apply. ORS 390.835(1).

8. Electricity Environmental considerations in general

Factual findings made by Water Resources Commission fully supported its conclusion that stream flows designated in order granting city permit to divert water in scenic waterway would adequately protect recreation, fish and wildlife uses. ORS 390.835(1), 536.310(12).

9. Electricity Generating facilities in general

Water Resources Commission's order allowing appropriation of water did not sufficiently explain how commission applied public interest criteria. ORS 537.170(5).

CJS, Electricity § 2(1)

In Banc

On review from the Court of Appeals.*

William P. Hutchison, Jr., Portland, argued the cause and filed the petition on behalf of the Petitioners on Review. With him on the petition were David R. Maier and Hutchinson, Hutchison and Hooper, Portland.

Philip Schradler, Assistant Attorney General, Salem, argued the cause on behalf of Respondent on Review Water Resources Department - State of Oregon.

Ruth M. Spetter, Office of City Attorney, Portland, argued the cause on behalf of Respondent on Review City of Portland.

Noelle Billups, Assistant County Counsel, Portland, filed an *amicus curiae* brief on behalf of Multnomah County. With her on the brief was Laurence Kressel, County Counsel for Multnomah County, Portland.

GILLETTE, J.

The decisions of the Court of Appeals and the Water Resources Commission are reversed. The case is remanded to the Water Resources Commission for proceedings consistent with this opinion.

* Judicial review of a Final Order of the Water Resources Commission, 85 Or App 255, 736 P2d 198 (1987).

GILLETTE, J.

In this case we are called upon to examine the impact, if any, of provisions of Oregon's Scenic Waterways Act, ORS 390.805 *et seq* (the Act), on a decision to permit hydroelectric generation on a portion of a river that thereafter flows into a scenic waterway. The Water Resources Commission (the commission) issued a permit allowing the City of Portland (the city) to divert water from the Bull Run River for the generation of hydroelectricity. The Bull Run River flows into the Sandy River a short distance above a 12.5-mile stretch of the Sandy River designated as a scenic waterway pursuant to the Act and OAR 736-40-010(7). Petitioners invoke the Scenic Waterways Act to support their opposition to the city's application. The Court of Appeals affirmed the order granting the application. We reverse.

At this point, a brief recitation of the city's use of Bull Run water is useful. The city maintains two reservoirs on the Bull Run River. Those reservoirs collect water for the city's use and, from 1894 to 1984, were the sole source of the city's water. Three conduits carry water from the reservoirs to terminal storage facilities located on Powell Butte. The maximum delivery capacity of the conduits is approximately 350 cubic feet per second (cfs), which is about twice the city's normal requirement.

Before 1984, excess Bull Run water was used to generate electricity, either at hydroelectric facilities maintained at the city's reservoir, or at the Roslyn Lake hydroelectric facility owned by Portland General Electric (PGE). The water then was discharged back into the Bull Run River and resumed its normal course into the Sandy River and through the Sandy River Scenic Waterway.

In 1984, the city developed a ground water well field on the south bank of the Columbia River to serve as an alternate source of water. This system includes a storage tank, a booster pump station and a water main connecting with the three conduits that divert Bull Run water to Powell Butte. The pump station pumps water from the well field storage tank to Powell Butte Reservoir for distribution. When not being used to pump water, the pump station's turbines may be operated in reverse mode to generate electricity.

During certain months, when water from the well field is not needed, the city proposes to pump excess Bull Run water to the Columbia River booster pump station to generate electricity, which it then plans to sell to PGE. After passing through the booster pump station, the water would be discharged into the Columbia River instead of being returned to the Bull Run River. The net effect would be to reduce the flow of Bull Run water into the Sandy and through the scenic waterway.

The city applied to the Commission for a permit to use Bull Run water for generating purposes. Petitioners opposed the application because the project would divert water that otherwise would flow through the Sandy River scenic waterway. For that reason, petitioners argued that the city must satisfy the requirements of ORS 390.835(1), which provides:

"It is declared that the highest and best uses of the waters within scenic waterways are recreation, fish and wildlife uses. The free-flowing character of these waters shall be maintained in quantities necessary for recreation, fish and wildlife uses. No dam, or reservoir, or other water impoundment facilities shall be constructed or placer mining permitted on waters within scenic waterways. No water diversion facility shall be constructed or used except by right previously established or as permitted by the Water Resources Commission, upon a finding that such diversion is necessary to uses designated in ORS 536.310(12), and in a manner consistent with the policies set forth under ORS 390.805 to 390.925. The Water Resources Commission shall administer and enforce the provisions of this subsection." (Emphasis added).

The Commission conducted hearings and issued a final order granting the city a permit to divert 170 cfs from December 1 through May 31 of each year, subject to various minimum stream flow requirements. The Commission concluded that:

"The Scenic Waterways Act and supporting rules apply to this application. Operation of the proposed project would reduce Bull Run River discharges to the lower reach of the Sandy River which is a designated scenic waterway. This designation requires a determination that the free-flowing character of the Sandy River shall be maintained in quantities necessary for recreation, fish and wildlife uses during the

times of diversion of water from Bull Run River by this project. Conditions on the schedule of operation, maintenance of instream flows and the small percentage flow reduction compared to the level of flows in the Sandy would avoid impacts on scenic waterway and other water use values of importance to the public and insure that quantities necessary for recreation, fish and wildlife uses shall be maintained as further set forth in separate findings. It is concluded, therefore, that the proposed project will not impair or be detrimental to the public interest."

Petitioners petitioned for judicial review. The Court of Appeals affirmed the issuance of the permit. *Diack v. City of Portland*, 85 Or App 255, 736 P2d 198 (1987). The court concluded that the emphasized portion of ORS 390.835(1), quoted above, does not apply to diversions of water outside the scenic waterway itself. 85 Or App at 259. Thus, the city need not show that the diversion was necessary to uses designated in ORS 536.310(12). However, the court also concluded that the Commission must ensure that water enters a scenic waterway "in quantities necessary for recreation, fish and wildlife uses." ORS 390.835(1). Finally, the court held that there was substantial evidence in the record to support the Commission's conclusion that "the diversion of a relatively small portion of the total flow, limited to the months of highest flow and lowest recreational use, will not affect the scenic waterway uses." 85 Or App at 259.

Petitioners petitioned for review, arguing that the Court of Appeals erred (1) in limiting the restrictions set out in ORS 390.835(1) to diversions of water within the scenic waterway itself and (2) in holding that there was sufficient evidence to support issuance of the permit.

I

We first address the city's contention that the Commission lacked jurisdiction over its application. The city raised this issue in a letter accompanying its application, but chose to "acquiesce" in the Commission's jurisdiction for the purposes of this case. In its post-argument memorandum of additional authorities to this court, the city resurrects its jurisdictional challenge.

1, 2. At the outset, we reject petitioners' argument that the

city has waived its right to challenge the Commission's jurisdiction. It is well settled that an agency's jurisdiction cannot be conferred by stipulation of the parties. *Hoffman v. City of Portland*, 294 Or 150, 156, 654 P2d 1106 (1982); *City of Hermiston v. ERB*, 280 Or 291, 295, 570 P2d 663 (1977); *Lane Council Govts. v. Emp. Assn.*, 277 Or 631, 636, 561 P2d 1012, *reh denied*, 278 Or 335, 563 P2d 729 (1977). "Jurisdiction" depends on whether the matter is one that the legislature has authorized the agency to decide. If a party may not stipulate to an agency's jurisdiction, it follows that the party also may not waive a jurisdictional issue by "acquiescence." The issue is properly before this court.

3. In general, the Commission has the authority to consider applications for the appropriation of water. ORS 537.130 provides:

"(1) Except for the use exempted under ORS 537.142 [not applicable here], any person intending to acquire the right to the beneficial use of any of the surface waters of this state shall, before beginning construction, enlargement or extension of any ditch, canal or other distributing or controlling works, or performing any work in connection with the construction, or proposed appropriation, make an application to the Water Resources Commission for a permit to make the appropriation.

"(2) Except for the use exempted under ORS 537.142, no person shall use, store or divert any waters until after the commission issues a permit to appropriate the waters."

For the purposes of ORS chapter 537, a "person" includes a municipal corporation. ORS 536.007(6). See also ORS 537.282 through 537.299 (special provisions covering municipal applicants for permits to appropriate water for hydroelectric power).

Standing alone, the above provisions clearly authorize the Commission to conduct hearings in cases such as these. However, ORS 536.320(2) provides:

"The commission shall not have power:

"* * * *

"(2) To modify, set aside or alter any existing right to use water or the priority of such use established under existing laws * * *."

The city argues that the Commission does not have the power to alter Portland's preexisting right to use Bull Run water. ORS 538.420 provides:

"(1) Exclusive right to the use of waters of Bull Run and Little Sandy Rivers is granted to the City of Portland. However, the Water Rights Act (as defined in ORS 537.010) shall not impair the rights of any person who, on February 24, 1909, had any vested right to or valid appropriation or bona fide notice of appropriation of the waters of either Bull Run River or Little Sandy River, under laws theretofore in effect or under any valid contract or deed of conveyance theretofore made with or by the City of Portland.

"(2) ORS 541.010 to 541.080 [governing water companies organized under 1891 act] shall not apply to Bull Run Creek or River."

We disagree that the above provision gave the city the unlimited right to use Bull Run water for hydroelectric generation. As originally enacted in 1909, ORS 538.420 provided:

"The exclusive right to the use of the waters of Bull Run and Little Sandy rivers is hereby granted to the city of Portland, and all rights to the waters of the lakes, rivers and streams of this state heretofore acquired for the purposes of municipal water supply are hereby confirmed, and no rights which shall be acquired under this act shall impair the rights of any municipal corporation to waters heretofore taken. The board of control shall reject, or grant, subject to municipal use, all applications where, in its judgment, the appropriation of the waters applied for impair a municipal water supply. It shall be the duty of municipal corporations of the state, on request of the state engineer, to furnish to him a statement of the amount and source of the municipal water supply, with probable increase or extension of the same; *provided*, that this act shall not be deemed or held to and shall not impair the rights of any person, association or corporation who may, at and prior to the time this act is filed in the office of the secretary of state, have any vested right to or valid appropriation or bona fide notice of appropriation of the waters of either the Bull Run or the Little Sandy river, under laws heretofore in effect or under any valid contract or deed of conveyance heretofore made with or by the city of Portland."

Lord's Oregon Laws 1910, p 2385-86, § 6672.

Read as a whole, the statute defined the rights of

cities to use water for municipal purposes. It was codified under Lord's Oregon Laws 1910, title XLIII, chapter VI, part (g), and was entitled "Of Municipal Water Supply." Separate provisions governed the appropriation of water for mining and electrical power. Lord's Oregon Laws 1910, title XLIII, chapter II. The Bull Run River was not exempted from the requirements of those provisions. In comparison, section 6525 of chapter I, title XLIII, Lord's Oregon Laws 1910, which governed the appropriation of water for "General Use and Irrigation," specifically provided that "no part of this chapter shall apply to Bull Run creek or river, or the waters thereof, being in Clackamas and Multnomah counties, Oregon, from which river or stream water is supplied to the city of Portland."

From the above we conclude that ORS 538.420 was originally enacted to ensure the City of Portland an adequate municipal water supply by granting it exclusive access to the Bull Run River for municipal purposes. The legislature did not intend to grant the city the unrestricted use of Bull Run water for purposes such as the generation of hydroelectric power. The statute has not since been amended to allow the city unlimited access to Bull Run water for such purposes. Therefore, notwithstanding ORS 538.420, the Commission has jurisdiction over the city's application for a permit to operate a hydroelectric facility on the Bull Run River.

II

The next issue is the effect, if any, of the Scenic Waterways Act on the city's application. The Scenic Waterways Act was proposed by initiative petition and was voted into law on November 3, 1970. As originally enacted, ORS 390.835(1) provided:

"Subject to subsection (12) of ORS 536.310, it is declared that the highest and best uses of the waters within scenic waterways are recreation, fish and wildlife uses. The free-flowing character of these waters shall be maintained in quantities necessary for recreation, fish and wildlife uses. No dam, or reservoir, or other water impoundment facility shall be constructed on waters within scenic waterways. No water diversion facility shall be constructed on such waters except as necessary to uses designated in subsection (12) of ORS 536.310 or as necessary to existing uses of related adjacent land. The submerged and submersible lands under and along

such waterways shall not be modified by placing, dredging or by any other means."

Or Laws 1971, ch 1, § 4.

In 1973, the legislature amended ORS 390.835 as follows:

"(1) [Subject to subsection (12) of ORS 536.310.] It is declared that the highest and best uses of the waters within scenic waterways are recreation, fish and wildlife uses. The free-flowing character of these waters shall be maintained in quantities necessary for recreation, fish and wildlife uses. No dam, or reservoir, or other water impoundment facility shall be constructed or **placer mining permitted** on waters within scenic waterways. **No water diversion facility shall be constructed or used except by right previously established or as permitted by the State Engineer, upon a finding that such diversion is necessary to uses designated in subsection (12) of ORS 536.310, and in a manner consistent with the policies set forth under ORS 390.805 to 390.925. The state Engineer shall administer and enforce the provisions of this subsection.**

"(2) No [water diversion] bank protection works or dredging facility shall be constructed or used on such waters, except as [necessary to uses designated in subsection (12) of ORS 536.310 or as necessary to existing uses of related adjacent land. The submerged and submersible lands under and along such waterways shall not be modified by placing, dredging or by any other means] **permitted by the Director of the Division of State Lands and approved by the State Land Board for purposes consistent with the policies set forth under ORS 390.805 to 390.925 for scenic waterways, and in a manner consistent with the policies set forth under ORS 541.605 to 541.660 for removal of material from the beds and banks and filling of any waters of this state. The Director of the Division of State Lands shall administer and enforce the provisions of this subsection.**"

Or Laws 1973, ch 756, § 1 (additions in boldface; deletions bracketed and italicized).

The Court of Appeals construed ORS 390.835(1) as follows:

"ORS 390.835(1) declares that the highest and best uses of

waters *within* scenic waterways are recreation, fish and wildlife uses. It then prohibits dams or water impoundments *within* scenic waterways and requires a permit for the construction of a diversion facility *within* a scenic waterway [sic]. The statute does not explicitly cover diversion of water *before* it enters the waterway. It does not even absolutely prohibit diversion facilities within a scenic waterway but allows them, if they have a permit or prior right and are necessary for a beneficial use described in ORS 536.310(12). The statutory scheme only considers construction within the scenic waterway itself."

85 Or App at 258-59 (emphasis in original; footnote omitted).

4. The Court of Appeals read the fourth sentence in ORS 390.835(1) as requiring a permit only for diversion facilities constructed or used within scenic waterways, even though the statute itself places no such limitation on the location of the diversion. Apparently, the Court of Appeals concluded that those who enacted the Scenic Waterways Act, having limited the scope of the third sentence in ORS 390.835(1) to waters within scenic waterways, intended to include the same limitation in the fourth sentence. For the reasons set out below, we disagree with that interpretation.

The 1973 legislature rewrote the fourth sentence in ORS 390.835(1) without using the limiting phrase, "in such waters." The legislative history does not indicate what the legislature meant by that change. Under the interpretation advocated by the city and by the Commission, the change would mean nothing.

This court has been "unwilling to deem a legislative act meaningless unless no other reasonable conclusion is available." *1000 Friends of Oregon v. Wasco County Court*, 299 Or 344, 358, 703 P2d 207 (1985). The legislature's failure to include the phrase "in such waters" was a material change in the language of the fourth sentence in ORS 390.835(1), and we presume that the legislature intended a material change in meaning. See *Fifth Ave. Corp. v. Washington County*, 282 Or 591, 581 P2d 50 (1978). The legislature may have concluded that it was insufficient to restrict only those diversions located within a scenic waterway. If so, it is reasonable to presume that the legislature intended to expand the scope of the fourth sentence in ORS 390.835(1) in order to protect water destined

for a scenic waterway. We conclude that no diversion of water that otherwise would enter a scenic waterway may be permitted unless the requirements of ORS 390.835(1) are met.

Under ORS 390.835(1), the Commission may approve a diversion only if it finds that the diversion is "necessary to uses designated in ORS 536.310(12)." ORS 536.310(12) provides:

"When proposed uses of water are in mutually exclusive conflict or when available supplies of water are insufficient for all who desire to use them, preference shall be given to human consumption purposes over all other uses and for livestock consumption, over any other use, and thereafter other beneficial purposes in such order as may be in the public interest consistent with the principles of Chapter 707, Oregon Laws 1955, under the existing circumstances * * *."

The Commission made no findings as to whether the city's proposed diversion is necessary to a beneficial use described in ORS 536.310(12). Accordingly, we reverse and remand to the Commission for such findings.

Petitioners also object to the Commission's findings that:

"The proposed project would generate revenues in excess of those currently being realized through the use of water from the Bull Run River;" and

"The proposed project would employ an established technology and would produce increased economic benefits through more intensive use of the waters involved."

5. Under the city's original proposal, the project would have operated for nine months out of the year and the city would have been required to maintain a minimum stream flow of 850 cfs. The city estimated that, operating on that schedule, the project would generate a net income of \$216,000 during the first year. However, under the permit issued by the department, the project will be able to operate for only six months out of the year and must maintain a minimum stream flow of between 1,500 and 2,000 cfs. The Commission nonetheless adopted, without discussion, the city's estimate of the amount of revenue the project would generate under the proposed schedule of operation. The Commission does not appear to have taken into account the reduction in the number of days the project would be allowed to operate under the permit. The

Commission's findings that accepted the revenue-generating capability of the proposed project do not support its conclusion that the project, operating under the restrictions imposed, will be of sufficient economic value to justify issuing the permit. On remand, the Commission should determine the income that the project will generate if it operates under the restrictions imposed by the permit, and make appropriate findings.

6. Petitioners also object that the Commission did not adequately explain its application of some of the statutory standards set out in ORS 390.835(1) and 537.170(5). They first argue that the Commission did not adequately explain how its order would maintain "the free-flowing character" of the waters within the Sandy River scenic waterway. ORS 390.835(1). The term "free-flowing" is self-explanatory and requires no interpretation by the Commission or by this court. The legislature appears to have used the term in a purely descriptive sense; it did not intend to establish a separate statutory standard. Petitioners' contentions to the contrary are not well taken.

7. In contrast, the requirement that the free-flowing character of the water "be maintained in sufficient quantities necessary for recreation, fish and wildlife uses" does set a standard the Commission must apply. See *Springfield Education Assn. v. School Dist.*, 290 Or 217, 228, 621 P2d 547 (1980). In that case, this court stated:

"* * * The legislature may use general delegative terms because it cannot foresee all the situations to which the legislation is to be applied and deems it operationally preferable to give to an agency the authority, responsibility and discretion for refining and executing generally expressed legislative policy. * * *"

Id.

ORS 390.835(1) expresses the general legislative policy that recreation, fish and wildlife uses are the highest and best uses of waters within scenic waterways. To that end, the statute delegates to the Commission the authority to determine the level of stream flow necessary to support recreation, fish and wildlife uses which may themselves differ from time to time. In this case, the Commission determined that minimum stream flows of 1,500 cfs in December, 1,900 in January

and February, and 2,000 in March through May, "are required for protection of salmon and steelhead habitat and will also benefit other aquatic life, wildlife and recreation uses in the Sandy River." The Commission also determined that "[a]n instream flow of 1500 cfs would provide protection for white-water boating and angling during the period when such use is most prevalent and not otherwise limited by naturally-occurring low flows."¹

8. Petitioners argue that "[t]he amended order was devoid of any link between the [Commission's] findings of fact and its conclusions which would allow a review of the [Commission's] reasoning to determine that the statutory standards were met." Because petitioners' argument never becomes more specific, it is difficult to determine their precise objection. The factual findings made by the Commission, some of which are quoted in the preceding paragraph, fully support its conclusion that the stream flows designated in the order will adequately protect recreation, fish and wildlife uses.² Absent a more fully articulated objection, we hold that they are sufficient.

Petitioners also object that the Commission failed to explain how it applied the standards set out in ORS 537.170(5)(b) and (e).³ ORS 537.170(5) provides, in part:

"In determining whether the proposed use would impair or be detrimental to the public interest, the Water Resources Commission shall consider:

"(b) The maximum economic development of the waters involved.

¹ The minimum stream flows set by the Commission are subject to change "[i]f, after commencement of project operations, the Department of Fish and Wildlife determines that additional protective measures need to be taken for the benefit of fish life"

² Multnomah County filed an *amicus curiae* brief in which it argued that the Commission's factual findings with regard to minimum stream flows were not supported by substantial evidence in the record. Because the issue was not presented in the petition for review, we do not address it.

³ At the time relevant to this case, ORS 537.170(5) was codified at ORS 537.170(3). See *Or Laws* 1985, ch 569, § 19.

"(e) The prevention of wasteful, uneconomic, impracticable or unreasonable use of the waters involved."

9. This provision represents a complete expression of legislative policy. The terms, "maximum economic development" and "wasteful, uneconomic, impracticable or unreasonable use," are examples of what this court has called "inexact terms." *Springfield Education Assn.*, *supra*, 290 Or at 224. In such a case, it is the agency's task to interpret ambiguous statutory terms in a way that effectuates the underlying statutory policy. The agency may do so either by rule or by order in a contested case. *Id.*⁴ The only statement in the Commission's order addressing this provision is the following, labeled "Ultimate Findings":

"In consideration of the provisions of ORS 537.170 ([5]a-g), the project proposed in Permit Application 63266 is an allowed use of available water providing increased economic and multiple use benefits through efficiency and diversity of use without detriment to existing rights or the control of the water resource. Effects on other water uses which may result from reduced Bull Run discharge to the Sandy River would be minimized by seasonal operational constraints, natural discharge patterns in the Sandy River and establishment of instream flows for the proposed project."

We agree with petitioners that the above statement does not adequately explain how the Commission applied the public interest criteria set out in ORS 537.170(5). It is little more than a regurgitation of the statutory language, without analysis. On remand, the Commission should explain more fully its application of the public interest criteria, pointing to the facts that it believes (if it still does) permit it to make the "ultimate" findings and the conclusions it draws from them.

Finally, petitioners argue that the Commission improperly applied the public interest criteria in ORS 537.170(5). We have already determined that the agency's order is not sufficiently explicit on that point to allow meaningful judicial review. On remand, the Commission will have an opportunity to explain its application of those criteria.

⁴ The Commission has since promulgated an administrative rule defining the terms set out in ORS 537.170(5). OAR 690-74-015. However, the hearing in this case took place before the effective date of that rule. See OAR 690-74-095.

The decisions of the Court of Appeals and the Water Resources Commission are reversed. The case is remanded to the Water Resources Commission for proceedings consistent with this opinion.